
Roland



EM-50/30

CREATIVE KEYBOARD

Owner's Manual

For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri - Eksplorationsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VARNING!

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri - Eksplorationsfare.
Ved utskifting benyttes kun batteri som anbefalet av apparatfabrikanten.
Brukt batteri returneres til apparatleverandøren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyypin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For E.C. Countries

This product complies with EC directives

- LOW VOLTAGE 73/23
- EMC 89/336"

Dieses Instrument entspricht folgenden EG-Verordnungen:

- NIEDRIGE SPANNUNG 73/23
- EMC 89/336"

Cet instrument est conforme aux directives CE suivantes:

- BASSE TENSION 73/23
- EMC 89/336"



Questo prodotto è conforme alle seguenti direttive CEE

- BASSA TENSIONE 73/23
- EMC 89/336"

Dit instrument beantwoordt aan de volgende EG richtlijnen:

- LAGE SPANNING 73/23
- EMC 89/336"

Este producto cumple con las siguientes directrices de la CE

- BAJO VOLTAJE 73/23
- EMC 89/336"

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

CLASS B This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B

AVIS

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.

Roland



EM-50/30

CREATIVE KEYBOARD

Owner's Manual

Thank you for choosing a Roland EM-50/30 Creative Keyboard. The EM-50 and EM-30 are members of Roland's new arranger keyboard family that once again redefines the standard for instruments equipped with an automatic accompaniment function. The most striking features include the Style Morphing and Style Progression functions for realtime changes of preprogrammed accompaniments. And, of course, the EM-50 and EM-30 offer a D Beam Controller, a stunning sound quality, and the best Music Styles available.

To get the most out of the EM-50/30 and to ensure many years of trouble-free service, we urge you to read through this Owner's Manual thoroughly.

To avoid confusion, let's agree to use the word "button" for all keys on the front panel, and only use "key" when referring to the EM-50/30's keyboard.

Before using this instrument, carefully read the sections entitled "IMPORTANT SAFETY INSTRUCTIONS", "USING THE UNIT SAFELY", and "IMPORTANT NOTES". These sections provide important information concerning the proper operation of the EM-50/30. Be sure to keep this manual in a safe place for future reference.

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Features

D Beam Controller

The EM-50/30's D Beam Controller is a new performance function introduced on Roland's ground-breaking MC-505 Groovebox. It allows you to control several parameters by moving your hand over an (invisible) infrared light beam.

Style Morphing & Style Progression

The *Style Morphing* function allows you to "create" new Music Styles (accompaniments) on the fly by replacing selected accompaniment parts of one Style with the parts from another Style.

Style Progression, on the other hand, allows you to simplify, add, or leave out accompaniment parts of the selected Music Style. This intuitive way of controlling the arrangements of your accompaniments is a wonderful assistant for creating just the right atmosphere for the music you play.

Large, graphic display

Your EM-50/30 is equipped with a large backlit display that keeps you posted about the current status of your instrument. Most functions are represented by means of straightforward icons that provide massive at-a-glance information without confusing you.

64 User Programs with Style Hold function

User Programs are memories where you can save your own panel settings. These include the currently selected Style, Tone (sound), tempo, as well as a lot of other parameters. At the press of a maximum of three buttons, you can thus completely reconfigure your instrument.

The EM-50/30's Style Hold function allows you to ignore Music Style selection when a User Program is recalled. Thus, while all other settings change, the previously selected Music Style remains in effect. One advantage of this system is that you can save different Style Morphing and Style Progression settings for otherwise identical panel settings, and alternate between them simply by selecting a different User Program.

Floppy disk drive (EM-50 only)

The EM-50 comes with a floppy disk drive so that you can save the internal settings (including the Recorder Song) and load them whenever necessary. It also allows you to load new Styles into the Flash ROM memories.

354 Tones and 12 Drum Kits

The EM-50/30 comes with 354 excellent instrument sounds taken from Roland's acclaimed sound library. In most instances, there will be several Tones to choose from for your music.

Furthermore, the EM-50/30's sound source conforms to General MIDI System Level 1 (GM for short) as well as Roland's GS Format.

64 Music Styles in ROM + 8 in Flash-ROM

The EM-50/30 comes with a total of 72 Music Styles (automatic accompaniments), 64 of which reside in a so-called *ROM memory* (these cannot be replaced). Eight additional Styles *can*, however, be replaced with other Styles loaded from floppy disk (EM-50) or via MIDI. Ask your Roland dealer for details about the availability of new Styles. (You will also find additional Styles on the CD-ROM.)

The ROM Styles include new Dance/Techno accompaniments as well as 8 Acoustic Styles. The latter are perfect for "unplugged" performances, Jazz ballads, etc.

Three modes

For enhanced operation, the EM-50/30 provides an Arranger, an Organ, and an M.Drums mode. These are selectable at the press of a button and thus bound to help you adapt the EM-50/30 to your musical needs in no time.

Audio inputs with LEVEL control

Another first on your EM-50/30 is the INPUT [LEV-EL] control that allows you to set the volume of an external audio source so as to provide the right "mix" with the EM-50/30's sounds.

Note: The illustrations used in this manual are taken from the EM-50. Any differences with the EM-30 will be pointed out on the spot. The major difference between the EM-50 and the EM-30 is that the latter doesn't have a disk drive.

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1. Important notes

In addition to the items listed under "IMPORTANT SAFETY INSTRUCTIONS" and "USING THE UNIT SAFELY", please read and observe the following:

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Power supply

- Do not use this instrument on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Be sure to only use the supplied adapter (Roland ACJ). The use of other adapters may damage your EM-50/30.
- Before connecting the EM-50/30 to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the EM-50/30 near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this instrument or move it farther away from the source of interference.
- This instrument may interfere with radio and television reception. Do not use it in the vicinity of such receivers.
- Do not expose the EM-50/30 to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the instrument.

Maintenance

- For everyday cleaning wipe the EM-50/30 with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the instrument thoroughly with a soft, dry cloth.
- Never use benzene, thinner, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and data

- Please be aware that all data contained in the instrument's memory may be lost when it is sent for repairs. Important data should always be saved to floppy disk (EM-50 only). In certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data. Roland assumes no liability concerning such loss of data.

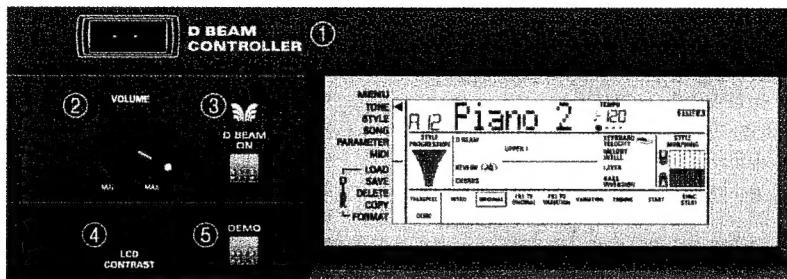
Additional precautions

- Please be aware that the memory contents can be irretrievably lost as a result of a malfunction, or the improper operation of the instrument. To protect yourself against the risk of losing important data, we recommend that you periodically make a backup copy of your settings by saving them to a floppy disk (EM-50 only) or via MIDI.
- Use a reasonable amount of care when using the instrument's buttons, other controls, and jacks/connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.

- When connecting/disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the instrument during normal operation. This is perfectly normal.
- To avoid disturbing your neighbors, try to keep the instrument's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially late at night).
- When you need to transport the instrument, package it in the box (including padding) that it came in. Otherwise, you will need to use equivalent packaging materials, or a flightcase.

2. Panel descriptions

2.1 Front panel



① D Beam Controller (sensor)

The D Beam Controller allows you to control various aspects of your EM-50/30 simply by moving your hand over the two "eyes". The function to be controlled is selectable.

② VOLUME control

Use this control to set the overall volume of your E-50/30. More refined volume balance settings can be made with the BALANCE buttons.

Note: For optimum sound quality, set the control to the level indicated by the white dot.

③ D BEAM ON button

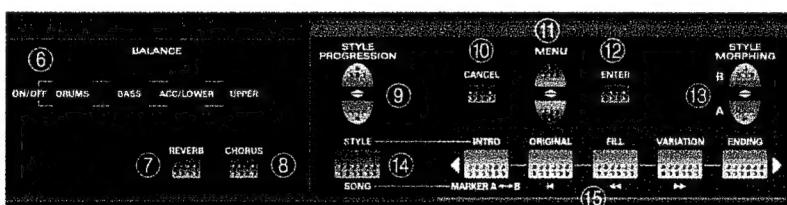
Press this button to activate the D Beam Controller (see page 22).

④ LCD CONTRAST knob

Use this knob to adjust the contrast if you are having problems reading the display.

⑤ DEMO button

Press this button whenever you want to listen to the EM-50/30's demo songs. There are 8 Tone demos and 8 Style demos (see page 12).



⑥ BALANCE buttons

Use the BALANCE buttons to change the volume of the corresponding section, or to switch it off altogether (see page 19).

⑦ REVERB button

This button allows you to switch the internal digital Reverb effect on and off. The setting of this button applies to all sections of the EM-50/30.

⑧ CHORUS button

This button allows you to switch the internal digital Chorus effect on and off. The setting of this button applies to the Upper 1/2, Lower, and M.Drum parts.

⑨ STYLE PROGRESSION buttons

These buttons allow you to change the complexity of the currently selected Music Style in realtime (see page 16).

⑩ CANCEL button

Use this button to cancel the currently selected operation and to return to a higher level. This button is also used to answer "No" to any question that may be displayed.

⑪ MENU ▲▼ buttons

Allow you to select a group of functions of the EM-50/30. The names of the levels are printed on the left side of the display. The currently selected level is indicated by an arrow (◀). These buttons also allow you set the value of the selected parameter in Parameter mode (see page 46).

⑫ ENTER button

Press this button to confirm the currently selected function or to answer "Yes" to a question in the display.

⑬ STYLE MORPHING buttons

These buttons allow you to create a "mix" of two selectable Music Styles. The result of this operation can be that the currently selected accompaniment uses the melodic patterns of Style A and the drums of Style B. There are 6 Style Morphing levels.

⑭ STYLE/SONG button

This button allows you to select the functions of the buttons to its right (INTRO, ORIGINAL, etc.) and thus to specify whether these buttons are used to

select Music Style divisions ("STYLE") or to operate the on-board Recorder ("SONG"). The functions of the STYLE/SONG buttons are displayed in the lower part of the display.

⑯ STYLE/SONG control buttons

Allow you to start, stop, etc., the Arranger or the EM-50/30's Recorder.



⑯ CUSTOM/HOLD button

Use this button to select a so-called Custom Music Style (in the EM-50/30's Flash ROM memory) or to activate the Style Hold function (when working with User Programs).

⑰ MUSIC STYLE/USER PROGRAM buttons

Use the number buttons to select the desired accompaniment (called *Music Style*). Press the [USER PROGRAM] button if you wish to use the number buttons for selecting User Programs (i.e. memories that contain your own settings).

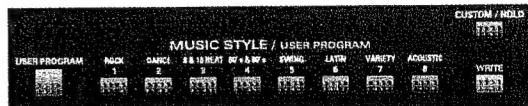
EM-50:

Hold down the [USER PROGRAM/WRITE] button for at least one second to activate the Write function that allows you to save your own User Program settings.

As you see, you can also use the MUSIC STYLE/USER PROGRAM buttons for writing names.

EM-30

The EM-30 does not have a disk drive, which is why the MUSIC STYLE/USER PROGRAM pad looks a little different.

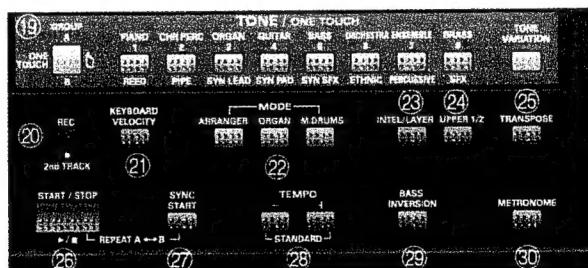


WRITE button

Press this button to save ("write") your settings as a User Program.

⑯ DISK USER button (EM-50)

The EM-50 provides a special temporary memory that allows you to use one Music Style on a floppy disk as if it were an internal Style (see page 41).



⑯ TONE/ONE TOUCH buttons

These buttons are used for selecting sounds (called *Tones*) for the parts you can play yourself (the "Realtime parts"). They also allow you to select one of eight One Touch programs available for each Music Style. "One Touch" programs are sets of settings for the Upper parts (the sounds you play with your right hand) that complement the genre of the Music Style you selected.

⑯ REC/2nd TRACK button

This button allows you to engage the EM-50/30's record function. In some cases, you can use it to activate the 2nd TRACK function which is for re-recording the Realtime parts. See page 30 for details.

⑯ KEYBOARD VELOCITY button

Press this button to switch the EM-50/30's velocity sensitivity on or off.

⑯ MODE buttons

These buttons allow you to specify how you want to use your EM-50/30: as an instrument with automatic accompaniments (Arranger), as an instrument with two organ sounds, one of which is used for playing bass notes (Organ) or for drumming on the keyboard (M.Drums).

⑯ INTELL/LAYER button

Press this button to add an automatic harmony voice to your melody (INTELL) or to add a second Tone to your right-hand melody playing (LAYER).

⑯ UPPER 1/2 button

This button allows you to alternate between the Upper 1 and 2 'tones while playing. You can use this facility for question-and-answer types of solo playing.

②5 TRANPOSE button

Use this button to switch the Transpose function on and off. The interval to be used when this function is on can be set via the Parameter menu (see page 46).

②6 START/STOP button

Use this button to start and stop Arranger or Recorder playback. When used in conjunction with [SYNC START] in Song mode, this button allows you to repeat the measures specified with the Marker function (see page 36).

②7 SYNC START button

This button is used to switch the SYNC START function on and off. When this function is on, you can start Arranger playback (or recording) by pressing one or several keys to the left of the split point. It also allows you to start/stop looped Recorder playback when pressed simultaneously with the [START/STOP] button.

②8 TEMPO -/+ buttons

Use these buttons to lower or increase the Arranger or Recorder tempo. Press them simultaneously to return to the preset tempo value.

②9 BASS INVERSION button

Press this button whenever you want the bass of the accompaniment to sound the lowest chord note you play in the left half of the keyboard.

③0 METRONOME button

This button is used to switch the metronome on and off.

③1 Disk drive (below the keyboard, EM-50 only)

This is where you insert 2HD or 2DD floppy disks. You can save Songs, User Programs and Custom Styles, delete Songs, User Programs, and Custom Styles; copy disks and format them.

③2 POWER switch (left side)

Press this button to switch your EM-50/30 on (display lights) and off (display goes dark).

**③3 BENDER/MODULATION lever**

This lever allows you to temporarily change the pitch ("Pitch Bend") in a slide guitar/trombone fashion, and/or add vibrato to the notes you are playing.

**③4 Headphone jacks (left side)**

This is where you can connect two pairs of stereo headphones (optional). By doing so, you switch off the EM-50/30's amplifier and speakers.

2.2. Rear panel



① MIDI OUT/IN connectors

Connect the MIDI OUT jack to the MIDI IN jack of your computer (or sound card) to transfer MIDI data from the EM-50/30 to the computer. Connect the MIDI IN jack of the EM-50/30 to the computer's MIDI OUT jack to receive data from the computer.

Note: Use the supplied MIDI/Joystick cable for connecting the EM-50/30 to the sound card of your computer. For other MIDI applications, you need regular MIDI cables.

② SUSTAIN jack

This is where you can connect an optional DP-2, DP-6, or BOSS FS-5U footswitch that allows you to hold ("sustain") the notes you play with your right hand.

③ INPUT jacks/LEVEL control

These jacks allow you to connect the outputs of your CD player, cassette deck, or the audio outputs of another instrument (sound module, synthesizer, etc.). Use the LEVEL control for setting the volume of this external signal source.

④ OUTPUT jacks

Connect these jacks to the inputs of your HiFi or a keyboard amplifier if you think the EM-50/30's internal amplification system is not powerful enough. If your amplifier is mono, be sure to only use the L/MONO jack.

You can also connect these jacks to the inputs of your cassette deck, MD recorder, etc. for making audio recordings of your music.

⑤ DC IN jack

This is where you need to connect the supplied ACJ adapter.

Note: Be sure to only use the ACJ adapter supplied with your EM-50/30. Other adapters may damage your Creative Keyboard.

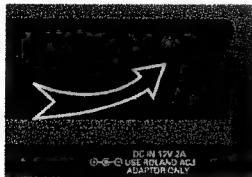
ENGLISH

3. Listening to the demo songs

3.1 Setting up your EM-50/30

The first thing you need to do is connect the adapter to a suitable wall outlet.

1. Unpack the EM-50/30 and place it on a stable surface.



2. Connect the small end of the adapter cable to the EM-50/30's DC IN jack, and the other end to a suitable wall outlet.

3. Press the [POWER] button (to the left of the keyboard) to switch on the EM-50/30.

3.2 Playing back the demo songs

Your EM-50/30 comes with 8 Tone demos and 8 Styles demos. The Tone demos show off the EM-50/30's amazing sound quality, while the Style demos give you an impression of the quality of the EM-50/30's Music Styles.

1. Press the [DEMO] button.

The [DEMO] icon in the lower left of the display is highlighted by means of a box, the D Beam icon (D BEAM ) lights, and the status line of the display contains the message Demo All.



There are several things you can do:

- ① To listen to all demo songs:

- Either press the [START/STOP] button, or...
- Move your hand over the "eyes" of the D Beam Controller (above the [VOLUME] control).

This will start playback of a Tone demo song, followed by a Style demo song, then again a Tone demo song, etc. This method allows you to listen to all 16 demo songs in sequence.

- ② To listen to a Tone demo song (DemoTne):

- Press a TONE/ONE TOUCH button [1]~[8]. Each button selects a different Tone demo song.
- Press the [START/STOP] button or move your hand over the "eyes" of the D Beam Controller to start playback of the selected song.

- ③ To listen to a Style demo song (DemoSt1):

- Press a MUSIC STYLE/USER PROGRAM [1]~[8] button to select a Style demo song. Again, each button selects a different Style demo song.
- Press the [START/STOP] button or move your hand over the "eyes" of the D Beam Controller to start playback of the selected song.

- ④ To stop playback of the demo song(s):

- Either press the [START/STOP] button, or...
- Move your hand over the "eyes" of the D Beam Controller (above the [VOLUME] control).

Note: If you then move your hand over the D Beam again, you start playback of the next demo song (only available in All mode).

Note: All demo songs © 1999 by Roland Europe in collaboration with Luigi Bruti and Roberto Lanciotti. All rights reserved.

2. Press the [DEMO] button again to switch off the EM-50/30's demo function.

4. Playing with accompaniment

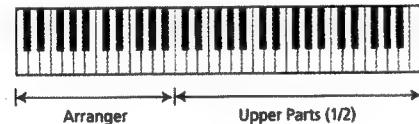
Now that you have an idea of your EM-50/30's capabilities, you probably want to play some music yourself. Before doing so, let us briefly look at the EM-50/30's four modes.

General remark

Your EM-50/30 can be used in four ways. Let us agree to call these "ways" *modes*.

Arranger mode—This mode is selected when you switch on your EM-50/30. To select it at a later stage, press the MODE [ARRANGER] button. Here, you can control the key of the automatic accompaniments ("Music Styles") with your left hand and play melodies with your right hand.

In Arranger mode, the EM-50/30's keyboard is split into two halves. The keys you press in the left half are used by the Arranger for determining the key of the accompaniment. The right half of the keyboard allows you to play a tune to the accompaniment. You can use one, or even two sounds, for doing so. These "sounds" are called *Upper parts* (1 and 2).



The key where the split is located is called the *split point*. At first, this is the note "C4" (with the C being the lowest note of the Upper half). You can change it, if you like "ArrSplit (Arranger Split)" on page 46.

Whole Upper mode—In this mode, you can play one sound using all 61 keys of the EM-50/30's keyboard. This is useful for piano parts, for instance. It is also possible to play two sounds simultaneously (a function called *Layer*). See page 20.

Organ mode—As the name implies, this mode is used for playing organ music. Select it by pressing the MODE [ORGAN] button. Here, you can play the melody with your right hand and add a chord backing with your left. If you like, your left hand not only plays chords but also bass notes based your chords. See "Switching on the M.Bass part" on page 26 for details.

M.Drums mode—In this mode, you can drum on the EM-50/30's keyboard. Every key is assigned to another drum/percussion sound. Press the MODE [M.DRUMS] button to select this mode (see also page 27).

About the Arranger

The EM-50/30's automatic accompaniment function is called *Arranger*. This Arranger uses prerecorded musical phrases (called "Divisions") that play accompaniment lines for a given musical genre. The name *Music Style* refers to a collection of such accompaniment Divisions. Each Division consists of the following elements:

- A drum part (A.Drum)
- A bass part (A.Bass)
- Melodic accompaniment lines (chords, riffs, etc.) (Accomp)

4.1 Basic Music Style operations

1. Take a look at the display to see whether the icons below appear (the location of the "box" is of no importance for the time being).

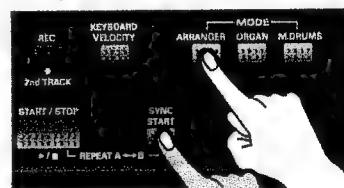


Also check whether the **STYLE A** icon is displayed. If that is not the case, press the [STYLE/SONG] button.

2. If the Arranger mode isn't already selected, press the MODE [ARRANGER] button.

The [ARRANGER] icon now appears more or less in the center of the display.

3. Press the [SYNC START] button.



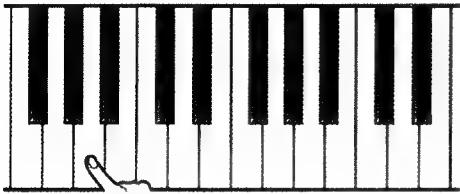
A box appears around the **SYNC START** message in the lower right-hand corner of the display to signal that this function has been switched on. *Sync Start* means that the Arranger will start Music Style playback as soon as you play a note or a chord with your left hand.

Note also the box surrounding the **ORIGINAL** message. It means that the first Division to be used is called *Original* (see also below).

4. Play a note to the left of the C4 key (the C below the [STYLE/SONG] button) to start Arranger playback.

ENGLISH

What you hear now is the Original Division of the 36 "16B Pop2" (38 "BLd RckS" on the EM-30) Style that is selected when you switch on the EM-50/30.



You can also start Arranger playback by pressing the [START/STOP] button. In that case, you need to press [SYNC START] to switch off the function of the same name.

Note: To check which Style is currently selected, press the [MENU ▼] button so as to position the arrow (◀) next to "STYLE" (upper left of the display).

Note: There is no need to hold the notes or chords you play with your left hand. You can release the keys right after specifying the new key for the Music Style. The function that takes care of this is called "Arr Mem" (see page 48).

5. Play a different note or chord to the left of the C4 key.

The Arranger still plays the same accompaniment – but in a different key. That is, all accompaniment parts (except for the drums) follow the note information you supply by pressing keys to the left of the split point.

Note also the CHORD information in the display. If you play a C in the left half of the keyboard, it will read:



If you play the notes "C" and "D" (a D and the C to its left) the Chord information window tells you:



The EM-50/30 uses a simplified chord fingering system that allows you to play one note for sounding major chords, two notes for minor chords (the root and the note three keys to the right of this note), and three, or four, notes for virtually all other chords. And just to prove that your EM-50/30 can handle all chords known to man, here is another display example:



Note: If you don't play chords with your left hand and start the Arranger by pressing [START/STOP], it will only play the drum accompaniment of the selected Music Style.

6. Now press the [VARIATION] button.



This selects another accompaniment pattern (Division) with a different arrangement, which is why the **VARIATION** icon is now surrounded by a box. It is usually more elaborate and may even contain other accompaniment parts.

7. If you like, you can now add a melody by playing in the right half ("Upper") of the keyboard.

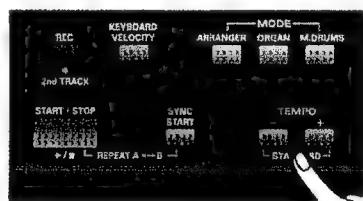
The section you control when you play with your right hand is called the *Upper 1 part*. The Upper 1 part currently uses the *Piano1wP* (A11) Tone (see the upper left corner of the display).

Note: See page 20 for more information about the Tones.

Tempo

8. If the tempo is too fast or too slow, use the TEMPO [-]/[+] buttons to change it.

See also "Metronome and Tempo" on page 18 for more information about the tempo display.



Note: To return to the Music Style's preset tempo, simultaneously press TEMPO [+] and [-].

9. Press the [START/STOP] button to stop playback again.

If you like, you can once again switch on the SYNC START function so that the Arranger starts every time you press a key in the left half of the keyboard.

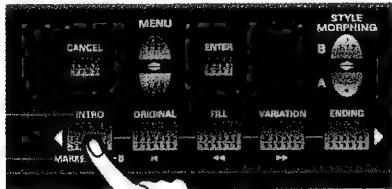
4.2 Selecting other Divisions

So far, we have used two Divisions: Original and Variation. These are the basic accompaniment patterns of the selected Music Style. Unlike the remaining Divisions, *Original* and *Variation* are repeated for as long as you leave the Arranger running or until you select another Division. The remaining Divisions, however, are played only once.

Introduction

If you like, you can start a song by having the Arranger play an Intro.

1. Press the [INTRO] button. The INTRO message is now “boxed” (**INTRO**).



2. Start Arranger playback in one of the following ways:
Play a note or chord in the left half of the keyboard to specify the key of the Music Style, and then press [START/STOP]; —or—
Activate the [SYNC START] function and play a note (or chord) in the left half of the keyboard to start Arranger playback.

Note: Do not play chords while the Intro is running. Most Intros already contain chord changes. Playing other chords during the Intro would lead to strange results.

3. While the Intro is running, you can already select the Division to use next by pressing [ORIGINAL] or [VARIATION].

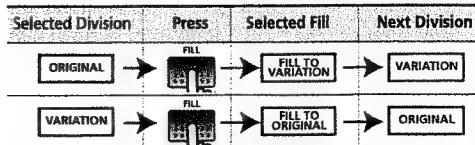
At the end of the Intro, the Arranger will switch to this Division.

Note: The length of the Intro depends on the selected Music Style (usually 2-8 bars).

Fill-Ins

Fill-Ins are short patterns (1 bar) that can be used at the end of a phrase (e.g. the first verse or chorus) or simply to add some variation. Fill-Ins are played only once.

Even though there is only one [FILL] button, there are, in fact two Fill-Ins: *Fill-In To Original* and *Fill-In To Variation*. The function of the [FILL] button depends on whether the display currently reads



If the Variation Division is currently selected, pressing [FILL] will start the Fill-In To Original pattern and then proceed with the Original pattern.

Note, however, that if the Arranger is stopped when you press the [FILL] button, starting the Arranger will start playback of the Fill-In that leads to the *currently selected* Division.

Example—if the display shows **VARIATION**, pressing **[FILL]** and then starting the Arranger will launch the Fill-In To Variation pattern.

Fill-Ins last one bar, yet their length also depends on when you press this button. When pressed in the first half of a bar, the Fill starts right away and lasts until the end of the current bar. Otherwise, the Fill starts on the first beat of the next bar and lasts an entire bar.

Ending

The Ending Division plays a suitable closing section for the currently selected Music Style. Again, the length of the Ending patterns varies between 2 and 8 bars. Just like Intros, Ending patterns may contain chord changes, so that it is probably wiser not to play any chords while the Ending is being played.

Press the [ENDING] button during Arranger playback to cause the Arranger to play the Ending pattern of the currently selected Music Style. The Ending starts at the beginning of the next bar. When it is finished, the Arranger stops.

4.3 Selecting other Styles

Your EM-50/30 comes with 64 Music Styles that are located in 8 Banks of 8 memories each. Let us now have a look at how to select other Music Styles. You may remember that each Music Style comprises all of the Divisions discussed above.

1. Press a MUSIC STYLE/USER PROGRAM [1]~[8] button.

This selects a Bank. As you see in the illustration below, the names of the banks are printed above the buttons. These indications will help you locate the desired Music Style. See "Music Style list" at the end of this manual for a list of the EM-50/30's Styles.



The arrow (◀) in the upper left corner of the display now jumps to the STYLE indication, and the first numeric field indicates the number of the button you pressed. Example: if you pressed the MUSIC STYLE/USER PROGRAM [6] button, the display now reads 6-. The dash means that you still need to specify a number.

Note: To cancel Music Style selection at this point, press the [CANCEL] button.

2. Press the same or another number button to choose a memory within the selected Music Style bank.

It is perfectly possible to select other Music Styles while the Arranger is running. In that case, the newly selected Music Style will use the same tempo as the previous Style. This is not the case when you select a Style while the Arranger is stopped. In that case, the tempo value stored for that Style is used (see also page 19).

Now go back to "Basic Music Style operations" on page 13 to try your newly selected Music Style.

Note: To check which Music Style is currently selected, press MENU ▲▼ to place the arrow (◀) next to the "STYLE" message and press [ENTER].

Selecting Custom Styles

The EM-50/30 provides eight additional memories whose contents can be replaced by other Music Styles (see page 57). These memories are called *Custom Style* memories. When the EM-50/30 is shipped, they already contain Music Styles, however.

Here is how to select a Custom Style:

1. Make sure the User Program function (see page 43) is not currently active.
2. Press the [CUSTOM/HOLD] button.



The message area of the display now reads 5-, signalling that you need to select a memory.

3. Press a MUSIC STYLE/USER PROGRAM number button [1]~[8] to select the desired Custom Style memory.

Note: To select yet another Custom Style, you must once again press [CUSTOM/HOLD] because the "Custom" function of that button only applies to one selection sequence.

4.4 Style Progression and Style Morphing

The EM-50/30 provides two exciting features that allow you to further refine the accompaniments played by the Arranger. These functions are called *Style Progression* and *Style Morphing*.

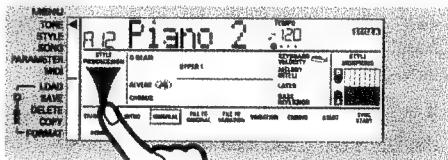
Style Progression ("orchestration")

The [STYLE PROGRESSION] buttons allow you to further refine and vary the accompaniment patterns played by the Arranger. This is a bit like orchestrating the accompaniment because you can leave out parts, thin out the drum part, or even use a totally different accompaniment. This can be done in realtime (i.e. while you are playing). See "More about Style Progression" on page 40 for a detailed discussion of this function.

Press STYLE PROGRESSION ▲ to select a higher level, and STYLE PROGRESSION ▼ to select a simpler version.



Watch the STYLE PROGRESSION field in the display. See page 40 for details about this field.



Note: Unless you select a User Program after switching on the EM-50/30, you can only "regress" (progress backwards) at first. Once on a lower level, you can, however, work your way up again using STYLE PROGRESSION ▲.

Style Progression is great fun and a wonderful way of using the full potential of Roland's acclaimed Arranger/Music Style expertise.

Style Morphing

Style Morphing is a totally new concept of working with Music Styles. This function allows you to use one or several accompaniment parts of one Music Style and the others of a second Music Style.

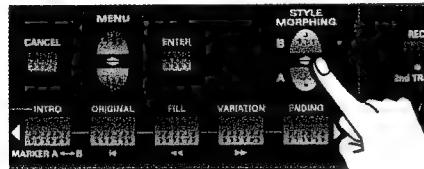
If you're not sure what is meant by *parts*, go back to "About the Arranger" on page 13. See "Style Morphing details" on page 40 for more information about the Style Morphing function.

Every time you select a Music Style, the EM-50/30 automatically prepares a second Style in the background. The Style you select is called "A". The "covert" Style is called "B". If you do not change the Style Mor-

phing setting, you won't even notice there is a second Style waiting to supply the requested accompaniment part(s).

The link between "A" and "B" Styles is preset. This allows the EM-50/30 to automate the selection process and to prepare a suitable "B" Style. Feel free, however, to assign another Music Style to "B" if you want to explore new morphing combinations (see "Selecting another "B" Style" on page 40).

Press **STYLE MORPHING [B]** to use one (or yet another) accompaniment part from Style B.



Watch the **STYLE MORPHING** field in the display. See page 40 for details about this field.

Press **STYLE MORPHING [A]** to use one more part from Style "A".

Note: When you select a new Music Style with the MUSIC STYLE/USER PROGRAM buttons, the Style Morphing function is reset to the "Style A only" status. The Style Morphing setting can, however, be written to a User Program.

As soon as you morph in one part from Style B (stages 1~6), the **STYLE B** icon appears below the **STYLE A** icon in the upper right-hand corner of the display. If you are only using Style B parts, only the **STYLE B** icon remains in the display.

4.5 Other useful Music Style functions

Bass Inversion



Press the **[BASS INVERSION]** button (the **BASS INVERSION** icon appears) to change the way the Arranger reads the chords you play.

If the icon is not displayed, the Accompaniment Bass part plays the root of the chords that feed the Arranger. If you play a C (or C chord), the bass thus sounds a C; if you play an A minor chord (or if you press A and the C to its right), the bass sounds and A, etc.

Activating Bass Inversion gives you more artistic license because you specify the note played by the Accompaniment Bass part (the lowest note of your chords). Switch on Bass Inversion for songs that rely on bass rather than on chord patterns (for example C – C/B – C/B, etc.).

One Touch Program

You may find yourself using the One Touch function at regular intervals because it automates quite a few tasks:

- The Arranger selects the preset Style tempo.
- SYNC START is switched on.
- The EM-50/30 selects Tones for Upper1 and Upper2 that are suitable for the selected Style (eight different possibilities, according to the selected One Touch memory).

There are 8 One Touch memories per Style with different settings for the above parameters. Here is how to select one:

1. Press and hold the **[GROUP/ONE TOUCH]** button until the number field in the upper left corner reads "OT1". Example:



The number that appears after "OT" varies according to the last One Touch memory you selected. When you first activate the One Touch function after switching on the EM-50/30, "OT1" is selected.



2. Use the TONE/ONE TOUCH [1]~[8] buttons to select the desired One Touch memory (1~8).

The number of the One Touch memory you select will be displayed behind the "OT" message in the upper left corner of the display. You may want to try out several possibilities.

3. Select another Music Style (see page 15) or call up the currently selected Style one more time.

Only now will the selected One Touch memory be loaded.

4. To leave the One Touch mode, press the [GROUP/ONE TOUCH] button again.

You now return to the last Tone you selected.

Melody Intelligence (INTEL)

The Melody Intelligence function adds a second voice (harmony notes) to the melodies you play with your right hand. In fact, it uses both halves of the keyboard to determine which notes to play:

- It looks at the melody notes in the right half; and...
- It analyzes the chords you play in the left half to see which notes it must add to your melody.

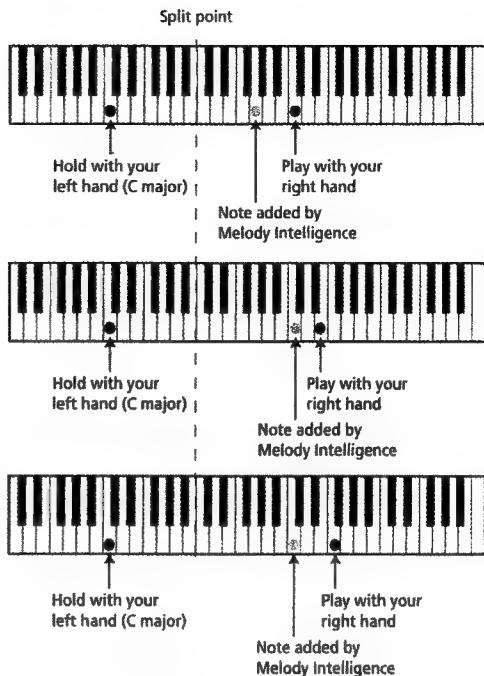
Repeatedly press the [INTEL/LAYER] button until the Melody Intelligence icon ( ) appears in the display (by "icon" we mean the notes).



Note: The [INTEL/LAYER] button also allows you to set the Layer function (see page 20), which is not what we need here. So be sure to select the Melody Intelligence icon.

To get a clear understanding of how this function works, here is a simple example (the function itself is far more powerful, of course):

- Press the [SYNC START] button (no box around the SYNC START message).
- Stop Arranger playback by pressing the [START/STOP] button.
- Play the following notes and notice how the automatic harmony notes change:



Of course, this function also works while the Arranger is running. That is actually when it is most useful. It is also available in Organ mode (see page 25).

The Melody Intelligence notes are played using the EM-50/30's Upper2 part. If you like, you can assign another Tone to this part (see page 25).

Metronome and Tempo

Before playing a song with Arranger backing, you may want to practise the melody to work on your timing without "distraction" from the Arranger. That is what the metronome is for.

1. Press the [METRONOME] button. The corresponding icon appears in the upper line of display and the metronome starts counting.



As you see, the currently selected tempo value is displayed, while the dots below the tempo value indicate the current beat. The initial tempo value and time signature of the metronome depend on the currently selected Music Style (or Song).

The dots below the tempo value indicate the current beat. The first dot signals the downbeat (first beat, or "1"), while the other dots indicate the remaining beats ("2", "3", "4"). If the currently selected Music Style is in "3/4", only the first three dots light. If the Style uses a "6/8" time signature, the fourth dot lights three times ("4", "5", "6").

2. Press the [SYNC START] button to switch off this function (the box surrounding SYNC START must disappear).

3. Stop Arranger playback by pressing [START/STOP] (if necessary).

4. Select a Music Style that uses the time signature you need (see page 15).

It would be a good idea to select the Style you are going to play to once you've mastered the melody. See also the Music Style chart at the end of this manual.

5. Use the TEMPO [-]/[+] buttons to set a comfortable tempo. Press [-] to decrease the tempo and [+] to increase it.

6. Start practising.

7. Press [METRONOME] again to stop the metronome (the metronome icon  disappears).

Note: The metronome setting is not saved to a User Program.

Volume balance and on/off status of the Arranger parts

Every Music Style consists of various musical parts that are played simultaneously (drums, bass, chords, etc.). The EM-50/30 provides a mixer that allows you to change the balance of these parts when you think the drums are too prominent, the bass is too soft, etc. That is what the BALANCE buttons are for:



Here, we will only discuss the "Arranger assignments" of these buttons. See page 26 for the remaining assignments.

All four **▲▼** pairs have two functions:

1. By pressing **▲** you increase the volume of the selected part or section; press **▼** to decrease it. (Setting range: 0-100).

When you change the volume setting of a part, the display briefly shows the value you entered and the name of the part or section that is affected by your setting. Here is an example (note the "VOLUME" message above the value):



2. By simultaneously pressing the **▲** and **▼** buttons of a pair, you switch off the part or section in question. Press both buttons again to switch the part or section back on.

In Arranger mode, the BALANCE buttons are assigned to the following parts:

▲▼ pair	Assigned to
DRUMS	Drum accompaniment of the currently selected Music Style (A.Drum).
BASS	The bass accompaniment of the selected Music Style (A.Bass).
ACC/LOWER	The melodic accompaniments of the selected Music Style (Accomp). The number of "ACC" parts varies from one Music Style to another. Up to six ACC parts (1-6) may be used simultaneously.
UPPER	The Upper 1/2 parts (i.e. the parts that allow you to play the melody). See page 24 for details about the exact behavior of these buttons.

The settings you make using these buttons can be saved to a User Program (see page 43).

Note: The BALANCE settings are shared by all modes (Arranger, Organ, M.Drums). That's why you can also set the "Accomp" volume (Accompaniment parts) in M.Drums mode, for example, even though the Arranger cannot be controlled in that mode.

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5. Upper part functions

In Arranger and Organ modes, the EM-50/30's keyboard is split into two halves. As explained in the previous chapter, the split in Arranger mode divides the keyboard into one half for Arranger control, and a second for playing melodies.

The sound you hear when you play with your right hand is called a *Tone*. That Tone belongs to a section called *Upper part*. The EM-50/30 provides two Upper parts (1 and 2) that can either be used in isolation or simultaneously.

The term "part" is used here because the Upper parts are actually "musicians" of an orchestra or band (the lead/solo). And like some musicians (guitarists, keyboard players, flute players, etc.), they do not use the same instrument for every song.

"Tones" are to the Upper parts what instruments are to the musicians of a band or orchestra: you can choose the instrument that best suits the song you want to play.

Note: The following applies both to the Arranger and the Organ modes.

5.1 Selecting the Whole Upper mode

The EM-50/30 allows you to decide against splitting the keyboard. This allows you to play "regular" piano music (and is also useful for educational purposes).

In this case, you can only use the Upper 1 and/or 2 parts, which is why we shall call this mode *Whole Upper* (Upper Parts assigned to the entire keyboard).

To select this mode, press MODE [ARRANGER] or [ORGAN] so that neither the  nor the  icon is displayed.

Note: The Arranger can supply a drum accompaniment part to your piano, etc. part. See "Playing to a drum accompaniment" on page 25.

5.2 Selecting the Upper 1 and/or 2 part(s)

As stated above, the EM-50/30 provides two Upper parts (i.e. two musicians). Here is how to choose the one you need:

1. If the **UPPER 1** message is displayed (more or less in the center of the display), the Upper 1 part is active.
2. To switch off Upper 1, while switching on the Upper 2 part, press the **[UPPER 1/2]** button ("UPPER 1" disappears and "UPPER 2" is displayed).



You can use the **[UPPER 1/2]** button to alternate between two completely different Tones (assigned to Upper 1 and Upper 2). This allows you to play question-and-answer types of melodies/solos simply by pressing this button several times in succession.

Layering Upper 1 and 2

3. To use both Upper 1 and Upper 2, press the **[INTEL/LAYER]** button once or twice until the Layer icon () appears in the display.



The Layer icon tells you that the Upper 2 part is now added to Upper 1. Every note you play with your right hand will be sounded by two Tones.

Note: The Layer function is not available when you activate the Melody Intelligence function (see page 18).

4. Press **[INTEL/LAYER]** again to switch the Layer function off again.

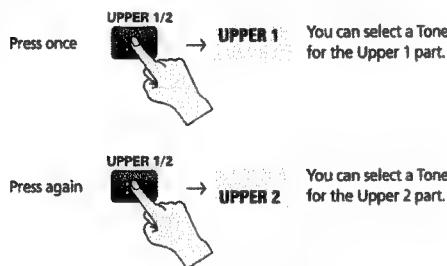
*Note: By doing so, you may activate the Melody Intelligence function. If that is not what you want, press **[INTEL/LAYER]** again (so that neither the MELODY INTELL nor the LAYER icon is displayed).*

5.3 Selecting Tones for the Upper parts

Both in Arranger and Organ modes, the EM-50/30 automatically assigns Tones to the Upper 1 and 2 parts. As explained while discussing the One Touch function (see page 17), these assignments include eight different Upper 1/2 sets for every Music Style. But, of course, you can also make your own selection among the EM-50/30's 354 Tones.

CAUTION: Though possible, you should not select Tones while you are playing. When the Layer icon is off, there is indeed no way to select the "other" part (Upper 1 or 2) for *Tone selection* without also selecting it for *playing*. It is thus not possible to prepare a Tone for an Upper part that is not being used. So stop Arranger playback (or playing in Organ mode) and assign the desired Tones to the Upper 1 and 2 parts. You can write these assignments to a User Program (see page 43) and alternate between these two Tones using the [UPPER 1/2] button.

1. Select the Upper part you want to assign a Tone to by pressing [UPPER 1/2].



2. If necessary, press the [GROUP/ONE TOUCH] button to select a Tone Group.

The arrow (◀) in the upper left corner of the display jumps to the TONE indication.

The EM-50/30's Tones are located in two Groups: A and B. If you look at the [GROUP/ONE TOUCH] button, you will notice there's an "A" above it and a "B" below it:



And if you look at the number buttons, you will notice they all have two names: one for the A Group and another for the B Group. All Tones are categorized by instrument families (called *Banks*) that help you narrow down your Tone search.

Here's an example: suppose you need a solo (or "lead") synthesizer sound. If you look at the number buttons, you will see that button [3] provides access to the SYN LEAD bank. That name is printed below the button, so you need to select Group B.

Note: There is no need to select the Group if the new Tone you want to use is in the same Group as the previous Tone.

3. Press a TONE/ONE TOUCH number button [1]~[8] to select a Tone bank.

If you need a solo synthesizer sound, for example, press [3].

4. Press another (or the same) number button to select a Tone within that bank.

If you want to use the "5th SawW" Tone (B37), for example, press [7].

But please note the following: In some cases, the EM-50/30 does not select the Tone you requested but rather a Tone that sounds even better. Such a Tone is called a *Variation*.

Variations

Tone Variations are alternatives for the Tones you can select with the TONE/ONE TOUCH buttons. The PIANO bank, for instance, contains a grand piano, an upright piano, an electric piano, etc. These are the Tones. If you also wanted to specify the *kind* of grand piano (mellow, bright, stereo/mono), you would have to turn to the Variations (i.e. "Tone subcategories").

Variations are indicated by means of a smaller number in the upper left corner of the display:



5. Press the [TONE VARIATION] button to step through the available Variations.

The number of Variations depends on the Tone you select. Sometimes, there's no Variation, sometimes there are as many as eight (or even more). If the Variation entry in the address field is empty, the "main" Tone (called *Capital*) is selected.

Note: You can also select Variations by holding down [TONE VARIATION] while you press a number button. This only works for the first eight Variations, however.

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5.4 Keyboard Velocity

The EM-50/30 is *velocity sensitive*, which means that the volume and brightness of the Upper 1/2 notes depend on the force/speed with which you strike the keys in the right half of the keyboard.

All acoustic instruments (piano, violin, flute, drums, etc.) are velocity sensitive. The harder you play, the louder and brighter the resulting notes will be, which creates a perfectly natural effect. (That explains why the KEYBOARD VELOCITY function is on every time you power on the EM-50/30.)

If the EM-50/30 is your first musical instrument ever, you may feel distracted by the volume and timbre variations of the notes you play in the Upper section. That is why we've included a button that allows you to switch off the EM-50/30's velocity sensitivity.

1. Press the [KEYBOARD VELOCITY] button to switch off the EM-50/30's velocity sensitivity (the **KEYBOARD VELOCITY** icon changes to **KEYBOARD VELOCITY**).



2. Press it again to once again activate the VELOCITY function.

Apart from the "distraction factor", you could take advantage of this function for playing organ Tones (see also page 25). Organs are not velocity sensitive, so that switching off KEYBOARD VELOCITY provides a more natural "feel". However, our Roland engineers knew that organs are not velocity sensitive when they created these Tones. The EM-50/30's velocity sensitivity is therefore used for alternating between a "mellower" and a more "aggressive" sound (a function called velocity switching).

Note: Keyboard Velocity applies to all parts you can play yourself (the "Realtime parts"): Upper 1/2, Lower, M.Bass (see page 25), and M.Drums (see page 27).

5.5 D Beam Controller

The D Beam Controller allows you to control various aspects of your performance by moving your hand, head, etc., in the air. You only need to make sure that you do so over the two "eyes" and within a 40cm ($\pm 16"$) range. Your movements are then translated into musical expression.

You may already have used the D Beam Controller for starting and stopping demo song playback (see page 12). Here, we will use the "usual" default assignment (i.e. when the EM-50/30 is not in demo song mode).

1. Press the [D BEAM ON] button.



The D Beam icon () appears in the display.

2. Play a few notes with your right hand (using an Upper part) and while doing so...

3. ...move your hand towards and away from the D Beam's "eyes".



Notice how the sound changes in response to your movements.

4. Press the [D BEAM ON] button once again to switch this function off again when you're done.

Note: See page 47 for how to assign other functions to the D Beam Controller.

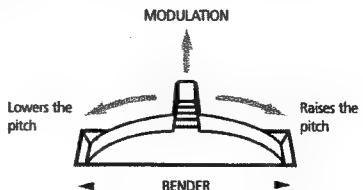
Note: If you hold down [D BEAM ON] for about two seconds, the D Beam parameter will be displayed. We don't need it here, so you may have to press [CANCEL] several times until the display returns to the previous message.

5.6 Pitch Bend, Modulation, and Sustain

Bender/Modulation lever

The BENDER/MODULATION lever to the left of the EM-50/30's keyboard can be used to add two kinds of effects to the Upper part notes. You can even use these effects simultaneously if you like.

1. Press the lever towards the rear of the EM-50/30 to add a vibrato effect ("wobble") to the notes you are playing.



2. Turn the lever to the left to temporarily lower the pitch of the notes you are playing. Turn it to the right to raise the pitch of your notes.

3. In either case, you can release the lever if you no longer need the effect.

Sustain Footswitch

You can connect an optional DP-2, DP-6, or BOSS FS-5U footswitch to the SUSTAIN jack in order to hold the Upper Tone notes even after releasing the keys. You might consider purchasing one if you want to make extensive use of the EM-50/30's D Beam function, because using a footswitch frees up your right hand. Here's how it works.

1. Connect a DP-2, DP-6, or BOSS FS-5U footswitch to the EM-50/30's SUSTAIN jack.



2. Play a note with your right hand.

3. Press the footswitch.

4. Release the key.

The note(s) you played keep on sounding after you release the corresponding keys.

5. To stop the note(s) from sounding, release the footswitch.

Note: The footswitch function is also available in Organ mode (see page 25) and applies to the Upper parts.

5.7 Chorus and Reverb

The EM-50/30 is equipped with two programmable digital effects: Reverb and Chorus.

Reverb

To activate the Reverb effect, press the [REVERB] button. An icon (REVERB ) will appear next to the REVERB message. If you don't need the Reverb effect, press that button again (icon disappears). The Reverb is available for all parts (Arranger, Realtime, and Song).



Note: It is probably a good idea to leave the Reverb effect on at all times to get a livelier sound image.

Note: You can select different Reverb and Chorus types if the preprogrammed settings are not to your liking. See "RevType (Reverb Type)" on page 48 and "ChrType (Chorus Type)" on page 49.

Chorus

To activate the Chorus effect, press the [CHORUS] button. An icon (CHORUS ) will appear next to the CHORUS message. If you don't need the Chorus effect, press that button again (icon disappears).

Note: This switch activates or deactivates the Chorus for the Upper1 and Upper2, Lower and M.Drum parts.

5.8 Transpose & Octave

Transpose

The Transpose function changes the pitch of the notes and chords you play. This is particularly useful if you've practised a song in a different key than the one you are asked to play it in when you accompany a singer whose voice is too high or too low for "your" way of performing the song. Instead of figuring out what other keys you need to press in order to accommodate the singer, you can set the required Transpose value and go on playing the song the way you practised it while sounding in a different key.

Here's an example:



1. Press the [TRANSPOSE] button. A box appears around TRANSPOSE message in the lower left corner of the display.



The default transposition interval is "1" (one semitone up). Here's how to change the interval:

2. Press and hold the [TRANSPOSE] button until the following message appears in the display:



3. The VALUE message already flashes, so do one of the following:

- a) Use the [MENU]   buttons to select the desired transposition interval (-12~12); —or—
- b) Keep holding the [TRANSPOSE] button while pressing the key that corresponds to the desired pitch of all "C" keys (in this case, the setting range is -5~6).

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Here's an example: if you want to hear a "D" every time you play a "C", select "2" (a), or press a "D" key (b). All other notes will be shifted by the same amount so that you end up sounding in D major when you actually play in C major, etc.

Note: The TrpValue refers to semitones. "Semitones" represent intervals between two keys (black/white, white/black, or white/white).

Note: You can also specify which sections of the EM-50/30 should be transposed. See "TrpMode (Transpose Mode)" on page 47.

Octave up/down

It is also possible to shift the Upper1 or Upper2 Tone up or down an octave. This can be effective for Techno/Dance songs where you need a piano sound that plays in two different octaves.

To achieve this, assign two different (or the same) piano sounds to Upper1 and Upper2 (see page 20), activate the Layer function (see page 20), and proceed as follows:

1. Select the Upper part you want to shift by pressing the [UPPER 1/2] button until the name of the desired part ("UPPER 1" or "UPPER 2") is displayed.

Note: The Octave function is probably only useful when Upper1 and Upper2 are layered, but feel free to use it with only one Upper part.

2. Press and hold the [UPPER 1/2] button until the message area of the display reads:



(Here, we selected Upper1 in step 1.)

3. Use the [MENU] ▲▼ button to select "-1" (one octave down), "0" (no shift), or "1".

5.9 Upper Tone balance

On page 19 we showed you how to set the balance of the Arranger parts. There is a fourth BALANCE ▲▼ pair called "UPPER" that allows you to set the volume of the Upper 1/2 parts, or to switch them off altogether.

At first, these buttons are assigned to both the Upper 1 and Upper 2 parts, so that you can change the volume of Upper1 and Upper 2 in one go (the display shows the message **UPPER 1&2**).

If you like, you can also change the volume of only Upper1 or Upper2. Based on what you know about Upper Tone selection for playing (see page 20) and Tone selection, you can momentarily assign the [UPPER ▲▼] BALANCE buttons to the currently selected Upper part: use the [UPPER 1/2] button to select the Upper1 or Upper2 part, then modify its status (on/off) or volume using the BALANCE buttons.

Be careful though: after a few moments of inaction, the BALANCE buttons will once again be assigned to both Upper parts.

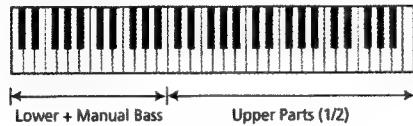
1. Press [UPPER ▲] BALANCE to increase the volume of the currently selected Upper part(s), and [UPPER ▼] BALANCE to decrease it (0~100).



2. Simultaneously press [UPPER ▲▼] BALANCE to switch off the currently selected Upper part(s). Press both buttons again to switch the Upper part(s) back on again.

6. Organ mode

In Organ mode, the keyboard is again split into two halves (*Lower* and *Upper*). This time, however, there is no automatic accompaniment. As its name implies, Organ mode is primarily intended for playing organ music, which is why selecting this mode calls up three organ sounds.



The left half of the keyboard allows you to use one part for chords (the *Lower* part) and a second one that plays bass notes (*Manual Bass*, or just *M. Bass*; this part must be switched on).

Just like in Arranger mode, there is a simplified chord fingering system (called "LWR Int") for the Lower part. See page 48 for how to switch it on if you want to use it. Furthermore, you could release the Lower notes immediately after playing them because they will be held until you play new notes. The function that takes care of this is called *LWR Mem*. See page 48 for how to switch it on.

The right half of the keyboard allows you to play one or two Upper parts. Here again, you can change the location of the split point (originally C4). See page 46 for details.

To select the Organ mode, press the MODE [ORGAN] button.



6.1 Selecting Tones

Selecting Upper Tones

Upper Tone selection (both for playing and Tone selection) works exactly like in Arranger mode. See page 20 and following for details.

Selecting Lower Tones

Whenever you select the Organ mode (by pressing MODE [ORGAN]), the EM-50/30 automatically assigns a Tone to the Lower part that goes well with the Upper part. At first, this will leave you with two organ sounds.

You can assign other Tones to the Lower part – and those Tones need not necessarily be organ sounds. All 354 Tones are selectable. The M.Bass Tone, however, is selected automatically and cannot be changed via the front panel.

Here is how to assign another Tone to the Lower part:

1. Press and hold the MODE [ORGAN] button until the LOWER icon appears in the center of the display.
2. If necessary, press the [GROUP/ONE TOUCH] button to select a Tone Group. See page 21 for more information about Groups.
3. Press a TONE/ONE TOUCH number button [1]~[8] to select a Tone bank.
4. Press another (or the same) number button to select a Tone within that bank.
5. Press the [TONE VARIATION] button to step through the available Variations. See page 21 for more information about Variations.
6. Press [UPPER 1/2] to leave the Lower Tone selection function.

6.2 Playing to a drum accompaniment

In Organ mode (as well as in Whole Upper mode, page 20), you can use the drum accompaniment (A.Drums) of the selected Music Style in much the same way as in Arranger mode. However, since you cannot change the key of the "melodic" Arranger parts (A.Bass, Accomp), the latter are not available.

Arranger operation is very similar to using Music Styles in Arranger mode. So please see pages 13 and following. Most functions are available. Here are a few remarks:

- Most *Style Progression* settings only apply to "melodic" accompaniment parts. Using the *Style Progression* function may therefore produce no audible changes.
- The same applies to the *Style Morphing* function. You may have to press the button in question several times.
- *Sync Start* (see page 13) also works in Organ mode and is controlled by the Lower part (i.e. the notes you play in the left half of the keyboard).

6.3 Other functions you can use

Most functions discussed so far are also available in Organ mode. Here are the most important ones:

- Melody Intelligence (see page 18).
- The metronome (see page 18).
- The Reverb and Chorus effects (see page 49).
- The D Beam Controller (see page 22).
- The Keyboard Velocity function (see page 22).
- Pitch Bend, Modulation, and Sustain (see page 22). The footswitch (SUSTAIN) is only available for the Upper parts.
- Almost all settings can be written to a User Program (see page 43). This includes the selection of the Organ mode itself.

6.4 Switching on the M.Bass part

In Organ mode, you can add a bass line to your left-hand playing by switching on a part called *M.Bass*. The *M.Bass* part plays bass notes based on the chords you play in the left half of the keyboard. If the [BASS INVERSION] function is off, the *M.Bass* part sounds the root notes (fundamentals) of the chords you play with your left hand (using the Lower part).

If the Bass Inversion icon () is displayed, the Manual Bass part sounds the lowest note of the chords you play with your left hand (not necessarily the root). Here is how to switch the *M.Bass* part on:

1. Use the MENU $\blacktriangle\blacktriangledown$ buttons to place the MENU arrow (\blacktriangleleft) next to the "PARAMETER" entry:

MENU
TONE
STYLE
SONG
PARAMETER \blacktriangleleft ENT PARAMETR

The "ENT" message now flashes to signal that you can enter the Parameter mode.

2. Press [ENTER].



MENU
TONE
STYLE
SONG
PARAMETER \blacktriangleleft ON WritePrt

3. Use the MENU $\blacktriangle\blacktriangledown$ buttons to select the "M.Bass" option.

MENU
TONE
STYLE
SONG
PARAMETER \blacktriangleleft OFF MBass

4. Confirm the choice of this parameter by pressing the [ENTER] button. The VALUE message above "OFF" starts flashing.

MENU
TONE
STYLE
SONG
PARAMETER \blacktriangleleft OFF MBass

5. Press MENU \blacktriangledown to select "ON". The *M.Bass* part is now on and sounds when you play in the left half of the keyboard.

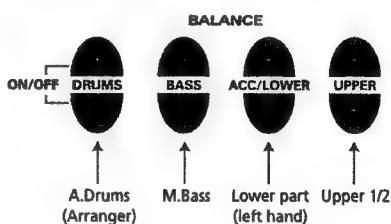
6. Press [CANCEL] several times (or MODE [ORGAN]) to leave the Parameter mode.

*Note: This setting can be written to a User Program (see page 43). Next time you switch on the EM-50/30, the *M.Bass* part will be off again, however. In that case, select a User Program that switches on the *M.Bass* part, recalls your own Tone assignments, etc.*

6.5 Balance in Organ mode

Like in Arranger mode, you can change the balance of the EM-50/30's parts using the BALANCE $\blacktriangle\blacktriangledown$ buttons. Again, simultaneously pressing a $\blacktriangle\blacktriangledown$ pair switches off (or on) the assigned part.

In Organ mode, the BALANCE buttons are assigned to the following parts:



Note: If you're not sure how to operate these buttons, see page 24.

7. M.Drums mode

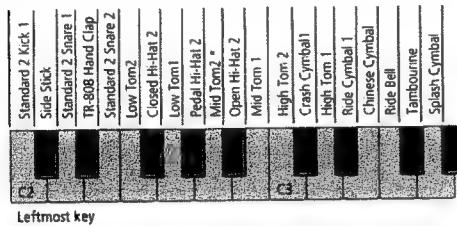
The M.Drums mode allows you to drum on the EM-50/30's keyboard. Here, every key is assigned to a different drum sound.

1. Press the MODE [M.DRUMS] button to select the M.Drums mode.



With the leftmost key, you can play a bass drum sound (also called "kick"). The white key next to it triggers a snare drum sound, etc. Try it out by pressing several keys either in succession or simultaneously.

Here is an example of a drum sound assignment:



If the Arranger is still running, it will go on sounding the last Music Style Division you selected. If you did not switch off the *Arr Mem* function (see page 48) ("On" by default), the bass and the accompaniment parts keep playing your last chord. That is probably when the M.Drums mode is most useful because it allows you to play a drum solo to an inspiring accompaniment.

There are two things you can do to enhance your drum solos while the Arranger is running:

- Simultaneously press BALANCE **▲▼** [DRUMS] to switch off the Music Style drums (A.Drums) —or—
- Assign the *16-ADrum* function to the D Beam Controller (see page 48) and move your hand over the "eyes" to switch the Arranger (accompaniment) drums off (and back on again).

7.1 Selecting other Drums Sets

The sounds used in M.Drums mode ("M.Drums" is short for *Manual Drums*) are not produced by Tones but rather by a *Drum Set*. Drum Sets are collections of over 90 sounds, each assigned to a different key.

The EM-50/30 comes with 12 Drum Sets to accommodate various musical genres. There is a "Standard" Set for good old rock/pop music, while several other sets (TR-909, Techno, etc.) can be used for

Dance/Techno music. Choose the Set that best suits your music.

1. Press a **TONE/ONE TOUCH** number button to select the desired Drum Set.



This allows you to select one of the 8 basic "Sets". There are four more Drums Sets, though:

2. Press the **[TONE VARIATION]** button to select a "Variation" Drum Set.

This button only works for the following Drum Set numbers: 2 and 4 (2 Variations). Like for Tone Variation selection, you can either press it repeatedly, or hold it down while you press **TONE/ONE TOUCH** [1] or [2].

Here are the names of the Drum Sets. See the end of this manual for sounds they contain.

dr1 Standard2	dr5 Jazz
dr2 Room	dr6 Brush
dr2 1 Techno	dr7 Orchestra
dr2 2 House	dr8 SFX
dr3 Power	
dr4 Electron	
dr4 1 TR-808	
dr4 2 TR-909	

Playing other drum/percussion sounds (MDr Shift)

The EM-50/30's keyboard allows you to play 61 different drum/percussion sounds. Yet, every Drum Set contains over 90 sounds. Here is how to play the sounds that lie outside the 61-note range of the EM-50/30's keyboard:

1. Press and hold the [M.DRUMS] until the following message appears on the display:



2. Use the **MENU **▲▼**** buttons to select either *dWN* or *UP*.

By selecting *dWN*, you literally shift the keyboard towards the left so that the keys trigger other drum sounds.

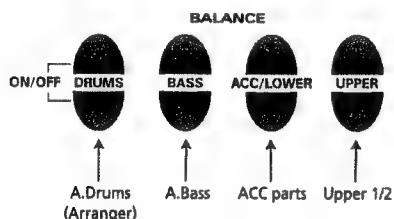
The same applies to a positive transposition of the drums, but in the opposite direction. That is, the "Standard Kick 1" sound, for example, sound is shifted to the left and can no longer be played via the keyboard. In return, other sounds are available.

Note: MDr Shift works in 3-octave steps.

3. Select **OFF** to return to the "standard" assignment of the drum sounds to the keyboard.

7.2 Volume balance in M.Drums mode

Unlike the Arranger and Organ modes, the M.Drums mode contains no new BALANCE **▲▼** button assignments. These buttons work the same as in Arranger mode. The [DRUMS] **▲▼** buttons are thus used for controlling the *accompaniment drums* (A.Drums) – not the drums you play yourself.



If, while setting the balance, you stumble upon messages such as "A.Bass", "Accomp", etc., please remember that they are there because you do not need to stop Arranger playback before selecting the M.Drums mode. Thus, if the Arranger is playing back a Division while you change to the M.Drums mode, the accompaniment goes on playing. In such situations, being able to reduce or increase the volume of an Arranger part or section (or to switch it off altogether) may be downright practical.

You can also set the volume of the Upper parts. See page 24 for details. This won't have any audible results in M.Drums mode, but it does allow you to prepare everything for when you switch back to Arranger (or Organ) mode.

Right... and what about the M.Drums part? You can't change its volume, nor can you switch it on or off. The reason is simple: since you deliberately selected the M.Drums part (by calling up the mode of the same name), the EM-50/30 assumes that your drum solo should always be audible. That is why the M.Drums volume is fixed at "100" (maximum volume).

8. Using the Recorder

Your EM-50/30 comes with a 2-track Recorder you can use for recording your own songs. Feel free to use the Arranger to add an accompaniment to the melodies you record. This functionality is actually the main reason why the Recorder provides two tracks: the first is used to record the accompaniment, while track 2 (or *2nd Track* as it is called) allows you to record the melody, etc., using the Realtime parts (Upper 1/2, Lower, M.Bass).

Note: The 2nd TRACK function is only available for Songs you record yourself – not for songs you load from disk (EM-50).

A word about the sound source

The EM-50/30's sound source is 24-voice polyphonic, which means that it can sound a maximum of 24 notes simultaneously. Some Tones, however, use two tone generators ("voices") per note, so that there may be situations where you won't be able to play 24 notes at the same time.

In most instances, polyphony will be no problem, but do keep in mind that you should not "over-arrange" your songs to ensure that all notes can be played back as expected.

8.1 Deleting the song in the internal memory

There is no real function for deleting the song in the internal memory. You can, however, achieve the same result by pressing the [REC] button once or twice until the  icon is displayed. As soon as you start recording, the old song will be overwritten and replaced by your new data.

8.2 Recording your own Songs

The EM-50/30's Recorder is surprisingly flexible. You can:

- Record with Arranger backing (see "Recording with Arranger backing").
- Record an organ piece with different sounds for the left and right hands (see "Recording piano music" on page 31). If you like, you can even add a drum accompaniment (just like in Organ mode).
- Record piano, etc., music using one Tone in Whole Upper mode (see page 32).
- Replace your solo/melody with a better version (see "Second recording pass" on page 30).
- Record your own drum/percussion part (either with or without the Arranger's drum part as rhythmic backing), and then add a melody to it (see page 32).

Recording with Arranger backing

This is probably what you will do most of the time: leave the accompaniment to the Arranger and add the melody in realtime. If you like, you can first record the Arranger parts (and concentrate on the chord changes), and then add the melody, etc., during a second pass (see below).

First recording pass

Parts you can record during your first "session"

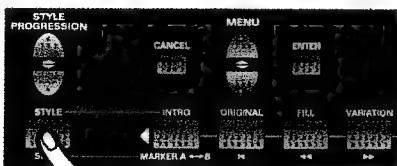
TRACK A ("one-shot")	TRACK B (can be overwritten)
All Arranger parts	Upper1 –and/or– Upper2 –or– M. Drums

By selecting , you can record the Arranger parts as well as the Upper 1 and 2 parts the first time around. The Arranger parts reside on a track we shall call "A", while the Upper part(s) will be recorded onto track "B". Track "B" parts can be overwritten using the 2nd TRACK function (see page 30). You may consider it your "second chance", which is only available for the most difficult parts: the ones you need to play in realtime.

Note: It is not possible to add the Arranger backing without overwriting the entire song, so be sure to record it the first time around.

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1. Press the [STYLE/SONG] button and check whether the display contains the **STYLE A** icon.



2. Press the MODE [ARRANGER] button so that the **ARRANGER** icon appears.

3. Select the Music Style you want to use as backing track.

If you like, you can activate the ONE TOUCH function "One Touch Program" or select a User Program "User Programs".

4. Select the Upper1 or Upper2 part using the [UPPER 1/2] button.

If you like, you can layer the Upper1 & Upper2 parts by pressing [INTEL/LAYER] until the LAYER icon appears.

5. If you also want to record the melody (using Upper1 and/or Upper2), select the Tones to be used (see page 20).

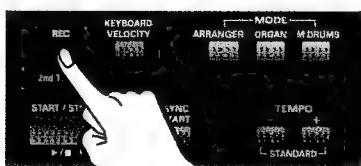
This is only necessary if you do not wish to take advantage of the ONE TOUCH function or one of your User Programs.

Note: You can also record the melody at a later stage. See "Second recording pass" on page 30.

6. Set the tempo using the TEMPO buttons.



7. Press the [REC] button once or twice to select the **REC** function.



8. Start recording in one of the following ways:

a) Play the first melody notes (to the right of the Split point). This will start the recording without Arranger backing. You can add it whenever you like by pressing [START/STOP] or by playing a chord in the left half of the keyboard (if the SYNC START function (see page 13) is on). The Arranger will then start at the next downbeat.

Note: If you start recording without the Arranger and want to bring it in at a later stage, it would be a good idea to switch on the metronome.

Note: If you start recording using this method, you can stop the Arranger by pressing [START/STOP] and improvise an ending without backing, because recording doesn't stop.

b) Press the [START/STOP] button to start Arranger playback with the selected Division.

c) Activate the SYNC START function and press one or several keys to the left of the Split point.

9. Stop recording in one of the following ways:

a) Press [REC] again.

b) Press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

c) If you started recording using methods (b) or (c) above, press [START/STOP] to stop both the Arranger and recording.

10. Stop the metronome if it is still running.

Note: Save your song to disk or via MIDI if you want to keep it and play it back sometime in the future (see page 34).

Listening to your song

To listen to your song, press the [START/STOP] (►/■) button. The EM-50/30 automatically switches to the Song mode. The display now contains the following icons (the INTRO, VARIATION, etc., icons are no longer available):



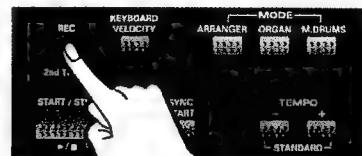
The PLAY icon is surrounded by a box to indicate that playback is running. Press [START/STOP] once again to stop playback.

Second recording pass

Suppose that you are happy with the accompaniment but would like to redo the melody (or that you deliberately forgot about the melody the first time around). The EM-50/30 allows you to do just that – and best of all: you only need to play the melody again because the accompaniment resides on a separate track!

Note: The 2nd TRACK function is only available for freshly recorded songs, i.e. songs you did not load from disk (or via MIDI).

1. Press the [REC] button.



It now automatically selects the 2nd TRACK function, which is indicated by the following icon: **2nd TRK REC**.

This icon by itself only indicates the 2nd TRACK record standby mode. You still need to start it. Be careful not to press the [REC] button too often (the **REC** icon must not be displayed).

Note: You can repeat this additional recording onto track "B" as many times as you like. Be sure, however, to select the "2nd TRACK" icon – otherwise you will erase the entire song.

2. Select the Upper Tone(s) you wish to use.

Play a few notes on the keyboard: this time, *all* keys are assigned to the Upper part(s). This may come in handy for piano pieces or solos that stretch over a wider range than would be possible when the Arranger or Organ mode is active!

Note: If you like, you can also press MODE [M.DRUMS] to record a drum part rather than a melody. Note that it is not possible to first redo or record the melody and then add manual drums.

3. Switch on the metronome if you like.

4. Press the [START/STOP] button.

The  icon now appears next to the  icon to signal that the EM-50/30 has started recording.

5. Play your melody or solo – and feel free to use the D Beam Controller and the BENDER/MODULATION lever!

6. When you are finished, press the [REC] button (or [START/STOP]).

Note: Save your song to disk or via MIDI if you want to keep it and play it back sometime in the future (see page 34).

Recording organ music

Parts you can record during your first "session":

TRACK A ("one-shot")	TRACK B (can be overwritten)
Acc. Drums (Arranger) Lower part M. Bass part	Upper1 –and/or– Upper2 –or– M. Drums

Select this method when you want to record organ music, or for any other type of song that requires the use of different sounds for the left and right hands. Again, what is recorded onto Track "A" cannot be replaced without overwriting the entire song, so be sure to get the Lower and/or M.Bass parts right. See also page 29.

First recording pass

1. Press the [STYLE/SONG] button and check whether the display contains the icon.



2. Press the MODE [ORGAN] button so that the icon appears.

If necessary, adjust the Split point (see "LwrSplit (Lower Split)" on page 46).

3. Select the Upper1 or Upper2 part using the [UPPER 1/2] button.

If you like, you can layer the Upper1 & Upper2 parts by pressing [INTEL/LAYER] until the LAYER icon appears.

4. Select the desired Tones for the Upper and Lower parts (see pages 25 and 20).

Note: If you need the M.Bass part, switch it on (see page 26).

5. Set the tempo using the TEMPO buttons.

Note: It is not possible to add the Lower, M.Bass and/or Arranger drum parts without overwriting the entire song, so be sure to record them the first time around (using "REC" rather than "2nd TRACK").

6. Select the Music Style whose drum part you want to use as backing.

7. Press the [REC] button once or twice to select the function.



8. Start recording in one of the following ways:

a) Play the first melody notes (to the right of the Split point). This will start the recording without the Arranger drums. You can add them whenever you like by pressing [START/STOP]. The drums will then start at the next downbeat.

Note: If you start recording without the Arranger drums and want to bring them in at a later stage, it would be a good idea to switch on the metronome.

b) Press the [START/STOP] button to start Arranger drum playback with the selected Division.

c) Press one or several keys to the left of the Split point (to play the first Lower-part notes, possibly with the M.Bass part).

d) Press [SYNC START] to activate this function, and play one or several notes to the left of the Split point. The Arranger drums will start in sync with your first notes.

9. Stop recording in one of the following ways:

a) If you started recording using methods (b) or (d) above, press [START/STOP] to stop both the Arranger and recording.

b) Press [REC] again.

c) Press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

Listening to your song

Press the [START/STOP] button to listen to your song. See also page 30.

Second recording pass

Operations are the same as for recordings made with the Arranger, so please see page 30. Again, you can decide to record the Upper1/2 parts or the M.Drums part. Bear in mind, though that by selecting 2nd TRACK, you overwrite (and thus lose) the Upper1/2 parts you may have recorded the first time around.

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Recording piano music

Parts you can record during your first "session":

TRACK A ("one-shot")	TRACK B (can be overwritten)
Acc. Drums (Arranger) Upper 1 and/or 2	Upper1 –and/or– Upper2 –or– M. Drums

Select this method when you want to record piano music, or for any other type of song that requires the use of only one sound for the entire keyboard. Again, what is recorded onto Track "A" cannot be replaced without overwriting the entire song. Here, however, you can add a second Upper1 and/or Upper2 part (Track "B") to the one(s) on track "A". The most obvious use for this function is to record the left-hand part of a piano piece the first time around, and the right hand-part using 2nd TRACK. If you like, you can add a drum accompaniment to your playing.

Note: The Upper part(s) you add using the 2nd TRACK function (Track "B") will use the same Tone(s) as the parts on track "A".

First recording pass

1. Press the [STYLE/SONG] button and check whether the display contains the **STYLE A** icon.
2. Press the **MODE [ORGAN]** or **[ARRANGER]** button so that neither the **ORGAN** nor the **ARRANGER** icon is displayed (**M.DRUMS** should not be displayed either).
3. Select the Upper1 or Upper2 part using the **[UPPER 1/2]** button.
If you like, you can layer the Upper1 & Upper2 parts by pressing **[INTEL/LAYER]** until the **LAYER** icon appears.
4. Select the desired Tones for the Upper parts (see page 20).
5. Set the tempo using the **TEMPO** buttons.
6. Select the Music Style whose drum part you want to use as backing.
7. Press the **[REC]** button once or twice to select the function.



8. Start recording in one of the following ways:
 - a) Play the first melody notes. This will start the recording without the Arranger drums. You can add them whenever you like by pressing **[START/STOP]**. The drums will then start at the next downbeat.
 - Note: If you start recording without the Arranger drums and want to bring them in at a later stage, it would be a good idea to switch on the metronome.*
 - b) Press the **[START/STOP]** button to start Arranger drum playback with the selected Division.

c) Press **[SYNC START]** to activate this function, and play one or several notes. The Arranger drums will start in sync with your first notes.

9. Stop recording in one of the following ways:

- a) If you started recording using methods (b) or (c) above, press **[START/STOP]** to stop both the Arranger and recording.
- b) Press **[REC]** again.
- c) Press the **[ENDING]** button to start the Ending phrase. As soon as it ends, recording stops.

Listening to your song

Press the **[START/STOP]** button to listen to your song. See also page 30.

Second recording pass

Operations are the same as for recordings made with the Arranger, so please see page 30. Here, you can add more Upper1/2 part notes to the ones already recorded onto track "A", or add some live drums using the **M.Drums** part.

Recording live drums

Parts you can record during your first "session":

TRACK A ("one-shot")	TRACK B (can be overwritten)
Acc. Drums (Arranger) M.Drums	Upper1 –and/or– Upper2 –or– M. Drums

Select this method to record a live drum part using the EM-50/30's **M.Drums** function (see page 27). What is recorded onto Track "A" cannot be replaced without overwriting the entire song, so be sure to get your first (or all) drum notes right. You can, however, add more drum notes using the 2nd TRACK function – or add a melody-cum-chords to your drum track. Feel free to use the Arranger's drum part as rhythmic backbone during the first recording pass.

First recording pass

1. Press the **[STYLE/SONG]** button and check whether the display contains the **STYLE A** icon.



2. Press the **MODE [M.DRUMS]** button so that the **M.DRUMS** icon appears.
3. Select the Drum Set you want to use for recording (see page 27).
4. Set the tempo using the **TEMPO** buttons.
Note: It is not possible to record the Arranger drum part without overwriting the entire song, so be sure to record it the first time around (using "REC" rather than "2nd TRACK").
5. Select the Music Style whose drum part you want to use as backing.

6. Press the [REC] button once or twice to select the **REC** function.



7. Start recording in one of the following ways:

a) Play the first drum notes. This will start the recording without the Arranger drums. You can add them whenever you like by pressing [START/STOP]. The drums will then start at the next downbeat.

Note: If you start recording without the Arranger drums and want to bring them in at a later stage, it would be a good idea to switch on the metronome.

b) Press the [START/STOP] button to start Arranger drum playback with the selected Division.
c) Press [SYNC START] to activate this function, and press one or several keys. The Arranger drums will start in sync with your first notes.

8. Stop recording in one of the following ways:

a) If you started recording using methods (b) or (c) above, press [START/STOP] to stop both the Arranger and recording.
b) Press [REC] again.
c) Press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

Listening to your song

Press the [START/STOP] button to listen to your song. See also page 30.

Second recording pass

Operations are the same as for recordings made with the Arranger, so please see page 30. Here, you can add more drum notes (using the same Drum Set as the one you selected before you started recording), or play the melodic part using the Upper1/2 parts.

Other recording options (Song mode)

It is also possible to record in the EM-50/30 Song mode (when the **SONG** icon is displayed). Doing so, however, means that you cannot rely on the Arranger for melodic and/or rhythmic backing.

Another "drawback" is that if you press MODE [ARRANGER] after selecting the Song mode, you cannot record anything to the "A" track and that the left half of the keyboard does nothing (because the Arranger cannot be used in Song mode). Recording (using the **REC** option) in Song/Arranger mode is probably not very useful. But it works, and you can take advantage of it. Here we shall only list the track "distribution" because operations are similar to the equivalent modes while the Arranger is available ("Style"). Just remember that the start/stop functions related to the Arranger (Sync Start, Ending) are no longer available.

1. Press the [STYLE/SONG] button and check whether the display contains the following messages:



2. Select the desired mode by pressing [ARRANGER], [ORGAN], or [M.DRUMS].

Remember that the Whole Upper mode can be selected by switching off the mode icon (ARRANGER, ORGAN, M.DRUMS) that is currently displayed.

① Tracks in Song/Arranger mode

TRACK A ("one-shot")	TRACK B (can be overwritten)
—Nothing— (only right half of the keyboard available)	Upper1 -and/or- Upper2 -or- M. Drums

② Tracks in Song/Organ mode

TRACK A ("one-shot")	TRACK B (can be overwritten)
Lower	Upper1 -and/or- Upper2 -or- M. Drums

③ Tracks in Song/M.Drums mode

TRACK A ("one-shot")	TRACK B (can be overwritten)
M.Drums	Upper1 -and/or- Upper2 -or- M. Drums

④ Tracks in Song/Whole Upper mode

TRACK A ("one-shot")	TRACK B (can be overwritten)
Upper 1/2	Upper1 -and/or- Upper2 -or- M. Drums

Again, Upper1/2 notes added using the 2nd TRACK function supplement the notes recorded onto track "A".

8.3 Changing the song tempo

You can change the song tempo with the TEMPO [−]/[+] buttons. Doing so, however, means that the tempo will still change if the song you are playing back contains tempo change messages. Furthermore, every time you jump back to the beginning of the song using [|◀], the programmed song tempo will be set.

8.4 Saving your Song

Though you can switch off your EM-50/30 without losing the song in its internal memory, be aware that it will be erased in certain cases (such as when receiv-

ing a Song dump or updating the system), and that recording new material with the **REC** option means that the song in the EM-50/30's internal memory will be overwritten.

The EM-50 is equipped with a floppy drive that allows you to save your new song to a 2HD or 2DD floppy disk. The EM-30 does not have a floppy drive, but it does allow you to transfer the Song data to an external data storage device (or computer) via MIDI.

Here, we shall only look at the Song Save function. See page 57 for the remaining Disk functions.

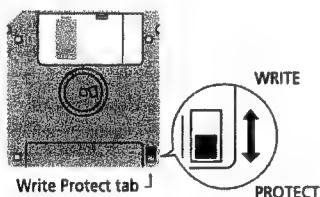
Note: Make it a habit to save your songs to disk (or via MIDI) before switching off the EM-50/30, even though that is unnecessary. Musicians are usually bad at house-keeping and keep forgetting those seemingly insignificant details...

Saving your Song to disk (EM-50 only)

1. Insert a blank disk into the drive.

If this is not the first song you save to disk, you may, of course, use the disk you used for previous songs.

Every floppy contains a square tab that allows you to "close" a little window. With the tab in that position, you can save data to the disk. Do not forget to write-enable the disk by closing this little window prior to inserting the floppy disk.



Formatting a disk

Before being able to save files to a disk, you need to prepare a floppy disk. You are free to use 2DD or 2HD disks. Please do not use the cheapest disks available unless you are absolutely sure that they are reliable. It would be a pity to lose a great recording because the disk you saved it to has become unreadable.

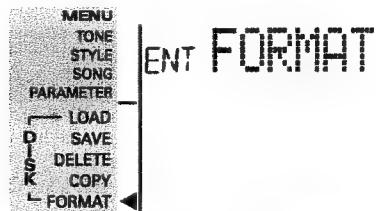
If the floppy you are about to use is IBM PC formatted, there is no need to format it, though disk access is faster with EM-50/30 formatted disks. Otherwise proceed as follows:

(For now, we'll assume that your disk is not yet formatted. If it is, skip to step (5)).

2. Use the MENU **▲▼** buttons to place the arrow (**◀**) next to the FORMAT entry (left side).



The display now responds with:



3. Press the [ENTER] button.



The "ENT" message flashes, indicating that you need to...

4. Press the [ENTER] button to format you disk.

Note: If you do not want to format your floppy, press [CANCEL] to return to the previous message ("FORMAT").

Note: By formatting a disk, you erase all files it contains. It would be a good idea to first check what it contains (e.g. on your PC).

The value to the left of the **FORMAT** message now counts down from "80" to "1" while the disk icon flashes to indicate that the disk is being accessed. When the disk is formatted, the message "Complete" is briefly displayed.

Save operation

OK, so your disk is ready. Now we need to save the song to it:

5. Use the MENU **▲▼** buttons to place the arrow (**◀**) next to the SAVE entry.



The display now responds with:



6. Press the [ENTER] button.



The "ENT" message flashes.

7. Use the MENU **▲▼** buttons to select **SAVE Song** and confirm by pressing [ENTER].

The display now looks as follows:



You could save this song with the current default name (SONG_000). A proper name, though, will help you identify the song file at all times. We therefore suggest you take the time to specify a meaningful name.

The "S" and the "■" alternately flash in the display to indicate that you can enter a character for this position.

8. Use the MUSIC STYLE/USER PROGRAM buttons for selecting the character you wish to assign to this position.



You may have to press the button in question several times to select the desired character. The following characters are available:

! # \$ % & ^ - @ ^ ~
 0 1 2 3 4 5 6 7 8 9
 A B C D E F G H I J K L M N
 O P Q R S T U V W X Y Z

Note: The cursor jumps automatically to the next position whenever you press a different button than the one you pressed before. For characters that are assigned to the same button, you need to move the cursor using the MENU ▲▼ buttons.

Note: If you select "SPACE" ([CUSTOM/HOLD] button), the display will insert a ". ". This because MS-DOS® does not allow you to use spaces.

9. If necessary, use the MENU ▲▼ buttons to move the cursor to the next position.

10. Repeat steps (8) and (9) to enter the remaining characters.

11. Press [ENTER] to save the file to disk.

The display now responds with the message **Saving** as well as a flashing disk icon (). When the song is saved, the **Complete** message appears.

If the message **DiskProt.** appears, you forgot to switch off the disk's Write protection. Press the EJECT button of the disk drive, remove the floppy and close the tab. Then, insert the disk again and press [ENTER].

12. Press [CANCEL] several times or use the MENU ▲▼ buttons to select another mode.

8.5 Fast Forward, Rewind, and Reset

The buttons of the STYLE/SONG pad have two functions: one in Style mode (printed above the buttons), and another one in Song mode (printed below the buttons). In Song mode, they allow you to do the following:



To fast forward (jump to a measure later in the song) press [**▶▶**]. To rewind (return to a measure that lies before the current position), press [**◀◀**]. You can hold down either button to accelerate the fast forward or rewind process. The measure indication in the upper right corner of the display will help you locate the measure you need.

Press [**◀◀**] (RESET) to jump back to the first measure of the song. You need to stop playback before being able to use the [**◀◀**] button.

Note: In certain cases, these three functions may not be available. This is only the case for very large songs, however.

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8.6 Loop playback (Repeat)

Another clever feature of the Recorder is that you can program playback loops. Again, you can do so during playback or while the Recorder is stopped.

1. Press [MARKER A↔B] where you want the loop to begin (the **MARKER A** icon is displayed).



2. Fast forward to the measure where you want the loop to end and press [MARKER A↔B] again (the **MARKER B** icon appears).



You can also program loops on the fly. Remember, however, that the Recorder always memorizes the beginning (downbeat) of the next measure.

3. To play back the loop you have just programmed, hold down [SYNC START] and press [START/STOP].



At the end of the B measure, the Recorder immediately jumps back to the beginning of measure A.

Note: In certain cases, the Marker function may not be available. This only happens with very large songs, however.

8.7 Playing back Standard MIDI Files (EM-50 only)

The EM-50 allows you to play back commercially available music data files (called *Standard MIDI Files*) or your own songs you saved to disk.

In fact, when you save a song to disk, it is saved as Standard MIDI Format 1 file and can also be played back using any other SMF compatible sequencer (or software).

Let us now have a look at how to play back a music data file:

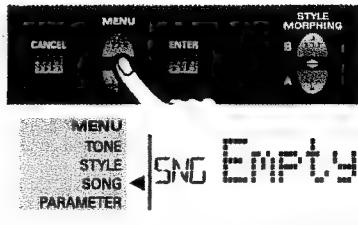
1. Insert a floppy disk with Song/Standard MIDI File data into the drive.

2. Press the [STYLE/SONG] button to switch to the EM-50's Song mode.

This is necessary because, otherwise, pressing the [START/STOP] button will start Arranger playback.

The black message in the upper right corner must read **SONG**.

3. Use the MENU **▲▼** buttons to position the arrow (**◀**) next to the **SONG** entry:



The above message ("Empty") is only an example because what is displayed, depends on whether you have inserted a disk and whether it contains Standard MIDI Files. Here is what the various messages mean:

Message	Meaning
Empty	The EM-50's song memory does not contain data (you have neither recorded a song nor played back a song on disk).
No Disk	You forgot to insert a disk into the drive.
No Files	The disk you inserted into the drive does not contain Standard MIDI Files.
Int. Song	The Song memory does contain song data and these are selected.

4. Press the [ENTER] button.



If an error message appears, see the table above and take the necessary steps.

5. Use the MENU **▲▼** buttons to select the Standard MIDI file you want to listen to.

Select "Int Song" to listen to the song you recorded yourself (see page 29).

Note: Please bear in mind that starting playback of the selected song on disk will erase your own song. Be sure to save it to disk before proceeding (see "Saving your Song" on page 34).

6. Press [ENTER] to load the first data chunk.

7. Once again check whether the **SONG** icon is displayed in the upper right corner of the display (if it is not, press [STYLE/SONG]).

8. Press [START/STOP] to start playback.

Press this button once again to stop playback. See also "Fast forward, Rewind, and Reset" and "Loop playback (Repeat)" for other functions you can use during playback.

8.8 Live performance with song backing (Minus One)

Your EM-50/30 allows you to mute any given part of the song you are currently playing back. You could use this feature to mute the solo part so that you can play it yourself. This is called *Minus One* playback (because one part of the original song will not be played back). The functions described below do not erase the data you no longer hear: they just prevent them from sounding.

All Realtime parts remain active in Song mode. In other words, you are free to use the Upper1, Upper2, Lower, and Manual Bass parts if you like. The Manual Drums part is also available but, as you remember, selecting the M.Drums part means that the other four Realtime parts are temporarily deactivated.

Select the Whole Upper (no icon), Organ (ORGAN) or M.Drums (M.DRUMS) mode.

Note: Whenever you start playing back a new song or return to the beginning of the current song (using [|◀]), all Realtime parts, except Upper1, will be switched off and the EM-50/30 will select the WHOLE UPPER keyboard mode.

Muting song parts

The EM-50/30 allows you to mute song parts, which means that they do not sound.

In most instances, you probably only want to mute the song part that plays the melody, so that you can play it yourself using the Upper1 (possibly doubled with the Upper2) part.

Here is how to mute the melody part:

1. Press MENU ▲▼ to place the mode arrow (◀) next to the PARAMETER message.
The "ENT" message now flashes in the display.
2. Press [ENTER] to enter the Parameter mode.



3. Use the MENU ▲▼ buttons to select the song part you wish to mute (Song P1~Song P16).

To mute the melody of the Recorder song (or Standard MIDI File), select "P4".

4. Press [ENTER] to confirm your parameter selection.

The On message now flashes to signal that you can change ("edit") it.



5. Use the MENU ▲▼ buttons to select "MtN" or "MtA".

MtN—The song part does not sound. MIDI messages other than Note On/Off and Velocity, however, are executed normally. That way, Tone selection, pitch bend, modulation, etc., behave the way you expect them to. This setting is useful for song parts you can replace with your own playing (see below).

MtA—Mutes all MIDI messages for the corresponding song part (including Tone selection, Pitch Bend, etc.).

You have now muted the melody of the Recorder song, which is linked to the Upper1 part. This link ensures that Upper1 sounds and behaves the same as the melody part.

Repeat the above procedure if you also want to mute other song parts.

6. To leave the Parameter mode, press [CANCEL] several times until the "PARAMETER" message is displayed, then use MENU ▲▼, followed by [ENTER] to select another mode.

Note: This setting can be saved to a User Program (see page 43).

Song parts linked to the EM-50/30's Realtime parts

Song Part	MIDI channel/ Song Part #)	EM-50/30
Drums	10 (*16)	M.Drums
Chord backing	3 (*11)	Lower
Solo/melody	4	Upper1
Counter melody	6	Upper2

(*) MIDI channel for songs you record on the EM-50/30 itself.

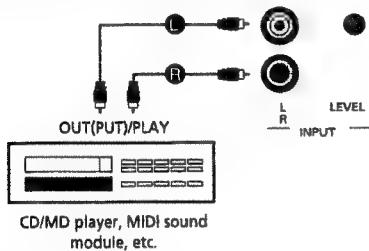
ENGLISH

9. Miscellaneous

9.1 Using the INPUTs

Use the INPUT jacks to connect a CD or MD player, a cassette deck or another instrument (synthesizer or sound module) to your EM-50/30. Doing so allows you to amplify the external "signal source" using the EM-50/30's speakers. Here is how to:

1. Switch off the EM-50/30.
2. Connect the OUT(PUT)/PLAY jacks of the external signal source to the EM-50/30's INPUT "L" (white) and "R" (red) jacks. See the illustration.



You will need a standard phono/RCA/Cinch cable.

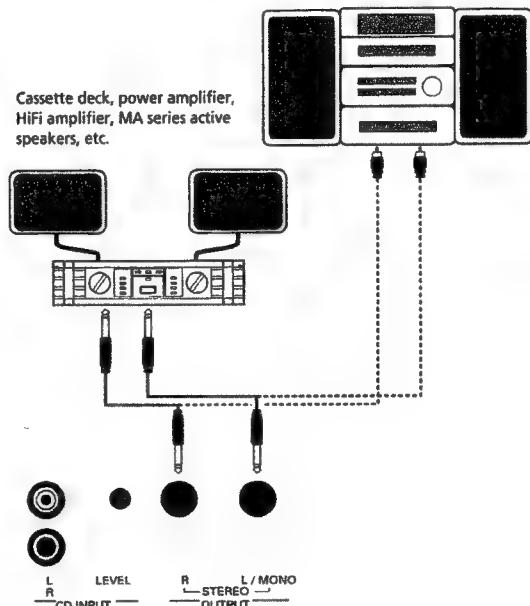
Note: For a synthesizer, digital piano, etc., you probably need an adapter cable (1/4" phone jack→phono/RCA). Consider using a pair of PJ-1Ms. Ask your Roland dealer for details.

3. Turn the [LEVEL] control next to the INPUT jacks all the way to the left (minimum).
4. Start playback of your signal source (in case of a synthesizer or module, consider starting a demo song).
5. Set the output level of the external signal source to a suitable level.
6. Gradually increase the [LEVEL] setting on the EM-50/30 until you obtain the desired level.

9.2 Using the OUTPUTs

If you like, you can also record your performance (or the Recorder song) to cassette, MD, etc. To this end, you need to connect the EM-50/30's OUTPUT L/R jacks to the external device's REC IN jacks. Use a standard 1/4" phone cable for doing so. Another use for these outputs is to connect the EM-50/30 to your HiFi or keyboard amplifier (such as the Roland KC-500/300/100). Using a HiFi amplifier requires the use of an adaptor plug (phono/RCA→1/4" jack). If you like, you can also purchase two Roland PJ-1M cables.

Note: By connecting the OUTPUT jacks, you do not switch off the EM-50/30 amplification system.



9.3 Setting the display contrast

Sometimes, the display may be difficult to read due to the lighting conditions in your living room, on stage, etc. In that case, you can improve the readability of the EM-50/30's display using the [LCD CONTRAST] control below the [VOLUME] control.



Turn it to the left to make the characters lighter, and to the right to make them darker.

9.4 Functions for educational purposes

The EM-50/30 provides two functions that may come in handy for music teachers or for those who use the EM-50/30 in class:

Deactivating or activating the Demo function

The EM-50/30's Demo function can be switched off so that pressing the [DEMO] button will have no effect at all. This may be useful in situations where the EM-50/30 is used in class. Here is how to deactivate the Demo function:

1. Switch off the EM-50/30.
2. Hold down the [DEMO] button while switching the EM-50/30 back on again.

This setting is remembered, so that next time you want to listen to a demo song, you have to repeat the above procedure.

Deactivating the Arranger

Use the following procedure to ensure that the Arranger cannot be started or stopped:

1. Switch off the EM-50/30.
2. Hold down the [STYLE/SONG] button while you switch the EM-50/30 back on again.

It will now be impossible to start/stop the Arranger using the [START/STOP] button or the Sync Start function.

Repeat the above procedure when you want to use the Arranger again.

Locking both the Arranger and the Demo function

A third "educational" option is to switch off both the Demo and the Arranger functions in one go:

1. Switch off the EM-50/30.
2. Hold down the [START/STOP] button while you switch the EM-50/30 back on again.

It will now be impossible to start/stop the Arranger or demo song playback. Repeat the above procedure when you want to use the Arranger and Demo function again.

Note: You can also hold down [DEMO] or [STYLE/SONG] while switching on the EM-50/30 to only unlock the Demo or Arranger facility.

10. Advanced Arranger settings

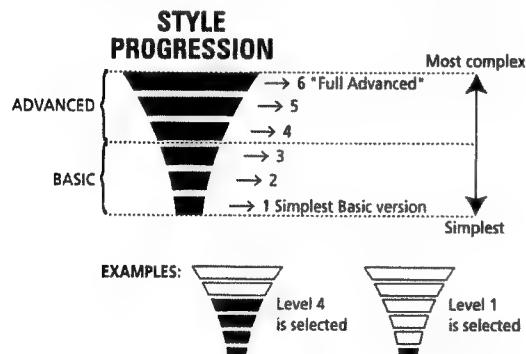
10.1 More about Style Progression

The Style Progression field in the display keeps you posted about the currently selected Style Progression level.

The levels are roughly divided into two groups (which we shall call *Advanced* and *Basic* for those familiar with previous Roland keyboards). Levels 4~6 represent different versions of the Advanced group, while levels 1~3 are Basic versions. That is why the most striking difference (except for the fact that some instruments are missing or added) will be between levels 3 (most complete Basic version) and 4 (simplest Advanced version). That transition may indeed involve the use of an altogether different Division pattern.

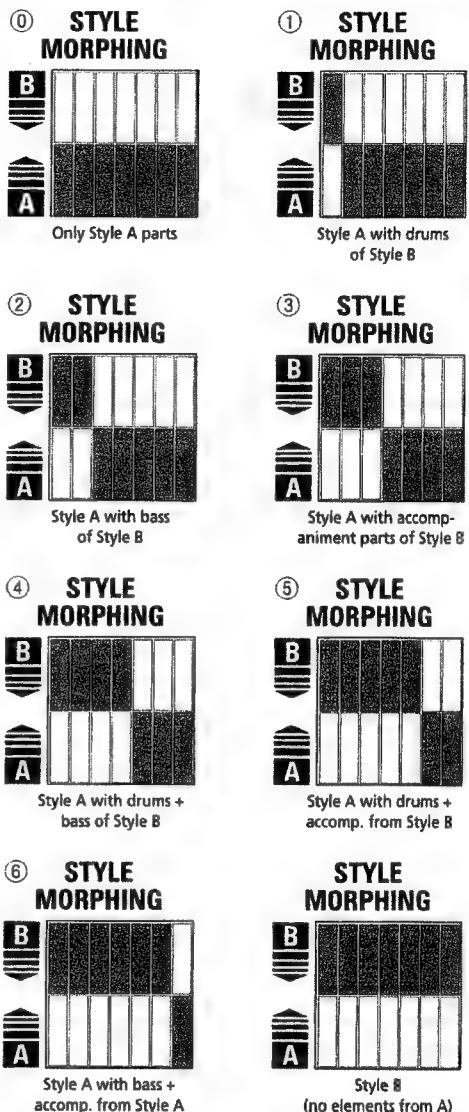
Please note that these are only guidelines that are certainly true of the EM-50/30's internal Styles. But since you can load new Styles into the Custom memories, the Style Progression behavior of these new Styles may vary somewhat.

There are 6 complexity levels to choose from. The last Style Progression setting will be written to a User Program (see page 43). So be sure to select the desired Style Progression level before saving your settings.



10.2 Style Morphing details

Style Morphing uses a display system that provides at-a-glance information about the current status of the Style Morphing function. Except for the possibility to use Style "A" or "B" in its entirety, there are 6 morphing levels. Here is what the indications in the STYLE MORPHING field mean:



Note: When you select a new Music Style with the MUSIC STYLE/USER PROGRAM buttons, the Style Morphing function is reset to the "A only" status ("0" in the above illustrations). The Style Morphing setting can, however, be written to a User Program.

10.3 Selecting another "B" Style

As stated earlier, the "B" Style is prepared automatically whenever you select an "A" Style, so that the Style Morphing function is ready whenever you are.

If you do not agree with this preset selection (or want to experiment with other Styles), hold down the STYLE MORPHING [B] (▲) button and select the

desired "B" Style using the MUSIC STYLE/USER PROGRAM buttons. This selection will also be written to a User Program.

Please be aware of the following when selecting a "B" Style:

- You can only select Styles that have the same time signature as the "A" Style. Example: you cannot morph a waltz (3/4 time signature) and an 8-beat Style (4/4).
- Style Morphing also works with new Styles you transfer to the Custom memories (page 57).
- Style Morphing also works with Disk User Styles (see below). This is only available on the EM-50 (the EM-30 doesn't have a floppy disk drive). The result of this operation depends on the Disk User Style that is currently in the EM-50's memory. Though this may seem obvious, you should bear this in mind when you write your settings to a User Program: next time you select that User Program, the EM-50's RAM memory may contain a different Disk User Style (or even no Style at all).

10.4 Disk User Styles (EM-50 only)

The EM-50 comes with a floppy disk drive that can be used for playing back Standard MIDI Files (see page 36), for saving your settings, etc., to disk, and for loading new Music Styles.

There are two ways of using new Music Styles (the first is also available on the EM-30):

- New Styles can be transferred to the Flash ROM memories (1~8), in which case they replace the Styles that resided in these memories when you purchased the EM-50/30. See page 57 for details and "Selecting Custom Styles" on page 16 for how to use Custom Styles;
- You can *load one Music Style* to the EM-50's Disk User memory and use it as if it were a 73rd Music Style. The Style data in this memory are only available until you switch off your EM-50 or load another Style.

Here, you will learn how to use the Disk User memory.

1. Insert a disk containing MSA or MSD series Music Styles for the EM-50 into the disk drive.

Note: See your Roland dealer for MSA and MSD series Style Disks. You can use Music Styles that were for the following (and probably also other) Roland instruments: E-86, E-68, E-96.

2. Press the [DISK USER] button.



The **DISK USER** message appears in the upper right corner of the display, while the mode arrow (\blacktriangleleft) jumps to the "STYLE" message.

Note: Let us agree to use the term RAM memory for the memory area that contains a single Style you load from disk. "RAM" is short for "Random Access Memory". It refers to a memory that only works while the instrument is switched on. As soon as you switch it off, the RAM memory is erased.

3. Use the MENU \blacktriangleleft \triangleright buttons to select a Music Style on the inserted floppy disk.

The number of the selected Disk User Style alternates with the "Ent" message, while the message line contains the name of the selected Disk User Style.

5. Now do one of the following:

a) Press the [ENTER] button to load the selected Disk User Style into the EM-50's RAM memory. —or—

b) Press the [START/STOP] button to load the Disk User Style and to start playback of that Style.

6. Press the [CANCEL] button to leave the Disk User function.

When you press [ENTER] (see step (5) a), the Disk User Style in the EM-50's RAM memory is automatically selected and can be started in one of the usual ways (see page 13). If you pressed [START/STOP], the freshly loaded Style is already playing at this point.

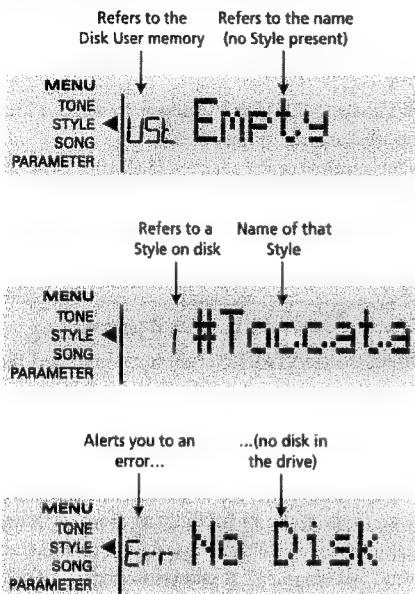
7. To return to an internal Style after working with a Disk User Style, use the MUSIC STYLE/USER PROGRAM number buttons. To once again use the Disk User Style, press [DISK USER]. To work with another Disk User Style, return to step (1) above.

Note: The selection of the Disk User memory will be written to a User Program (see page 43). This, however refers to the memory address rather than its contents. Next time you recall such a User Program, the EM-50 will therefore use the last Disk User Style you loaded after switching it on. If the Disk User Style is empty at that time, the EM-50 will go on using the last internal Style you selected.

ENGLISH

Display messages while loading a Disk User Style

Let us briefly look at the information that is displayed during the load operation of a Disk User Style. Once you know how to read it, you will have little trouble understanding what you are doing and/or why what you want to do does not seem to work.



What you really should pay attention to is whether the message line starts with "USt" or a number. The Style name to its right contains no hint about the location of the Style.

Here is an example: if the Disk User memory already contains the "#Toccata" Style when you press [DISK USER], the display will show "USt #Toccata". If you then press MENU ▼ (to select another Style on disk), the display may change to "1 #Toccata". This means that the first Style on disk is also called "#Toccata" (and thus probably the one you loaded earlier).

Loading it again by pressing [ENTER] is unnecessary. (But you probably want to press MENU ▼ again to select another Style on that disk...)

Note: Some disk Styles are too big for the EM-50's RAM memory. That is why the message Err - Too Big may appear. In that case, select another Style on disk.

11. User Programs

The EM-50/30 is equipped with 64 User Programs that allow you to store almost all settings (or registrations) you make on the front panel and via the Parameter menu (see page 46).

Note: MIDI settings are not saved to a User Program because the EM-50/30 memorizes them automatically.

11.1 Writing your settings to a User Program

It is a good idea to write your settings frequently, even if you still need to do some editing afterwards. Those intermediary saves allow you to return to the previous stage whenever you do not like your last modifications. In other words, you could (and probably should) use the User Programs as "temporary memories" to be able to return to the previously edited settings, discarding only the latest modifications.

Try saving your settings after...

- selecting Tones for the Realtime parts;
- selecting a Style, the first division, and after setting the tempo;
- editing the EM-50/30's Parameters (see page 46);
- modifying the volume balance;

In short, every time you like the settings you just made. That way, every subsequent modification can be undone by selecting the previously saved version.

1. Activate the User Program Write function:

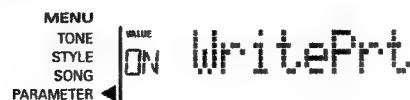
a) On the EM-50: press and hold the [USER PROGRAM/WRITE] button.



b) On the EM-30: press and hold the [WRITE] button.



The EM-50/30 now automatically jumps to the following parameter:

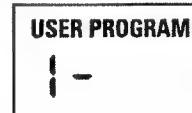


Every time you power on your EM-50/30, the Write Protect function is switched on. It is therefore impossible to accidentally overwrite an existing User Program memory. But since that is precisely what we want to do here, you must proceed as follows:

2. Press MENU ▼ to set Write Protect to "Off".

3. Again press and hold the [USER PROGRAM/WRITE] (or [WRITE]) button while pressing a MUSIC STYLE/USER PROGRAM number button.

The number you select appears in the USER PROGRAM field of the display. This is the User Program bank. There are eight banks of 8 numbers each.



4. Press another (or the same) number button to specify the desired memory within the selected bank.



Here, we selected memory "8" of bank "1". The display now responds with the following messages (Complete means that your settings have been stored and can be recalled).

... Write ?
Write
Complete

It is perfectly possible to program several User Programs for the same song. Selecting a User Program is a lot faster than calling up the Parameter mode, modifying the settings, etc., while playing. In other words, you could write one User Program for the first part of a song, another for the bridge, and a third one for the closing section. Doing so allows you to "play" with the On/Off status and volume of the Realtime parts, for example.

5. Release the [USER PROGRAM/WRITE] (or [WRITE]) button.

Note: To be on the safe side, you should turn WritePrt back on again after writing your settings to a User Program. See page 46.

Notes about writing User Programs

Leaving the User Program environment

Press [USER PROGRAM] to leave the User Program environment. The User Program field in the display will go blank again.

Mode selection

The mode (Arranger, page 13; Organ, page 25; M.Drums, page 27, Whole Upper, page 20) is also memorized when you write a User Program. You could take advantage of this facility to alternate between Arranger (song proper) and Organ (ad lib introduction or ending without Arranger backing) modes with suitable settings for both. This procedure (rather than pressing the MODE [ORGAN] button, for example) is the only guarantee that the settings you do not want to change remain in effect.

Meaning of the dashes below the User Program number

At some stage, you may come across four dashes below the User Program number (see the example).



They mean that the last User Program you selected is still in effect but that the current settings no longer correspond to the ones in that memory. Such changes may include the status of the Reverb or Chorus effect, a changed Balance value, etc.

Before selecting another User Program or switching off the EM-50/30, you should therefore write these settings to the same (or a different) User Program if you want to keep them. Otherwise, you lose these changes. Please also see page 44.

User Programs and Disk User (EM-50 only)/Custom Styles

The address of the Style you select is also memorized. That is also the case of the EM-50's Style RAM memory that may contain a so-called Disk User Style (see page 41) as well as of the selected Custom Style (see page 16). The EM-50/30 only remembers the memory address —not the name of the Style it contained when you wrote your settings to a User Program.

Note: The EM-30 does not support the Disk User Style facility because it has no disk drive. It does, however, use this system for the Custom Style memories.

If, at the time you recall such a User Program, no Disk User Style is available, the EM-50 will go on using the last internal Music Style you selected. If the Style RAM memory does contain a Disk User Style, it will be used. But remember that it may be the wrong Style (namely the last Disk User Style you loaded).

A similar system is used for Custom Style memories 1~8. These are Flash ROM memories whose contents

may be replaced (see page 57). Again, the EM-50/30 only remembers the address (C1, C2, C3...) but not the name of the Style (no names are used internally). This may lead to situations where recalling a User Program (see below) does select the correct Custom memory but the wrong Style. In that case, reload Custom Styles that were in use when you wrote the User Program in question.

11.2 Selecting a User Program

Though the User Program you specified above is already selected, there will be times when you need to select another memory. In that case, here is what you need to do:

1. Switch to User Program selection mode:

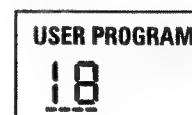
a) On the EM-50: briefly press [USER PROGRAM/ WRITE]. Do not hold this button down because doing so will start the Write procedure (see above).



b) On the EM-30: press [USER PROGRAM] (here, the duration is of no importance).



The User Program field now indicates the number of the User Program you selected last, or "11" if you have not yet selected a User Program since switching on the EM-50/30. The important thing to note here are the dashes below the number:



They are meant to alert you to the fact that the EM-50/30 is still using the last manual changes you may have made before selecting the User Program function. The User Program number therefore only means "this is the last memory you selected". None of its settings are being used for the time being. By pressing [USER PROGRAM/ WRITE] (or [USER PROGRAM]) again, you can leave the User Program mode without changing your manual settings. This may be important to remember if you were about to write your settings and accidentally pressed the wrong button (or didn't press it long enough).

To actually select a User Program...

2. Press a [MUSIC STYLE/USER PROGRAM] number button.

You can perform this step a little ahead of the song part where you want the new settings to take effect.

Only when you specify the User Program *number* will the corresponding settings be loaded.

3. Press another (or the same) number button to specify the desired memory within the selected bank.
The settings of the selected User Program will be recalled.

Note: You do not need to load all User Program settings. See "Selectively recalling User Program settings (Style Hold)" for more information.

Note: As soon as you modify any setting (on the front panel or in the Parameter menu), four dashes appear below the User Program number. See also "Meaning of the dashes below the User Program number" on page 44.

4. Once again press [USER PROGRAM/WRITE] (or [USER PROGRAM]) to leave the User Program mode.

Note: On the EM-50, you can also press [DISK USER] to leave this mode.

Selectively recalling User Program settings (Style Hold)

Style Hold allows you to keep certain settings of the previous User Program while selecting another User Program. Selectively loading User Program settings allows you to quickly assign other Tones to the Real-time parts without loading the Style parameters contained in the new User Program.

The parameters affected by the Style Hold setting are:

- Address of the currently selected Style (internal, Custom Style, or Disk User)
- Style Progression setting (see page 16)
- Style Morphing setting (see page 16)
- Arr Int setting (see page 48)
- Arr Mem setting (see page 48)



Pressing the [CUSTOM/HOLD] button without selecting a User Program afterwards has no effect. Only when you select another User Program will the data filter (because that is what Style Hold is) start working.

Note: The "HOLD" function is only available in User Program mode. You need to select it by pressing [USER PROGRAM/WRITE] (EM-50) or [USER PROGRAM] (EM-30). Otherwise, the [CUSTOM/HOLD] button is used for Custom Style selection (see page 16).

12. Parameter mode

The EM-50/30's Parameter mode contains more advanced settings you may not need every day. They allow you to fine-tune your instrument's response. It would therefore be a good idea to familiarize yourself with these parameters. All settings (except *Write Protect*) can be written to a User Program.

12.1 Editing the parameters (general procedure)

You can edit the EM-50/30's parameters via the display. Here is a general outline to be used for all parameters discussed below:

1. Press MENU $\blacktriangle\blacktriangledown$ to place the mode arrow (\blacktriangleleft) next to the **PARAMETER** message.



The "ENT" message now flashes in the display.

2. Press [ENTER] to enter the Parameter mode.



3. Use the MENU $\blacktriangle\blacktriangledown$ buttons to select the parameter you wish to edit (see below).

*Note: If you selected this mode by mistake, press [CANCEL] to return to the **PARAMETER** message, use MENU $\blacktriangle\blacktriangledown$ to select another mode, and press [ENTER].*

4. Press [ENTER] to confirm your parameter selection.

The value or On/Off message to the left of the parameter name now flashes to signal that you can change ("edit") it.

5. Use the MENU $\blacktriangle\blacktriangledown$ buttons to modify the value of the selected parameter.

Note: To return to the default value of the currently selected parameter, simultaneously press MENU $\blacktriangle\blacktriangledown$.

6. To leave the Parameter mode, press [CANCEL] several times until the "PARAMETER" message is displayed, then use MENU $\blacktriangle\blacktriangledown$, followed by [ENTER] to select another mode.

12.2 Parameters

The following parameters are available:

WritePrt (Write Protect)

(Off, On) This parameter is the same as the one that appears when you try to write your settings to a User Program (see page 43). Write Protect is automatically set to "On" when you power off the EM-50/30. However, the first time you try to write your settings to a User Program after switching on the EM-50/30, WritePrt automatically appears and can be switched off just before writing your settings. – So why include this parameter here?

Because otherwise, the only way to switch WritePrt back on again would be to power the EM-50/30 off and on again, which is not very convenient and may lead to the loss of other settings (such as the Disk User Style in RAM). And there will be situations where you do not want your saved settings to be accidentally overwritten by someone else (or yourself). So once you are satisfied with a User Program, call up this parameter and switch it back On.

Please bear in mind, though, that this only slows down the Write procedure (because the WritePrt message appears when you attempt to write your settings). It does not make it impossible altogether.

MstrTune (Master Tune)

(415.3~466.2, Default: 440.0) This parameter allows you to change the EM-50/30's overall tuning, which may be necessary when you accompany a singer, an acoustic instrument, or when you play to a recording on CD or cassette. See also "Using the INPUTs" on page 38.

ArrSplit (Arranger Split)

(48~84, Default: 60) Use this parameter to set the split point for the Arranger mode. The note you set here is the lowest note you can play with the Upper1/2 parts. See also "About the Arranger" on page 13. The number refers to a note. "60" refers to the note "C4" (the one below the [STYLE/SONG] button).

LwrSplit (Lower Split)

(48~84, Default: 60) Use this parameter to set the split point for the Organ mode. The note you select here is the lowest note you can play with the Upper1/2 parts.

MBass

(On/Off, Default: Off) See "Switching on the M.Bass part" on page 26.

UP1 Octv/UP2 Octv/LWR Octv

(-1, 0, 1) These three parameters allow you to shift the octave of the part in question (Upper1, Upper2, or

Lower). See also page 24 for the Upper parts. LWR Octv works in much the same way.

MDrShift

(Off, dWN, UP, *Default*: Off). This parameter allows you to shift the EM-50/30's keyboard in order to play drum/percussion sounds that are currently not accessible. See also "Playing other drum/percussion sounds (MDr Shift)" on page 27.

TrpValue (Transpose interval)

(-12~12, *Default*: 1) Use this parameter to transpose the EM-50/30 in semitones. What exactly will be transposed depends on the setting for the *TrpMode* parameter (see below). If you're not sure what transposition is, see "Transpose" on page 23. This parameter can also be selected by holding down the [TRANSPOSE] button.

TrpMode (Transpose Mode)

(*Default*: I-S) This parameter allows you to select what parts (and sections) are affected by the Transpose interval.

INT—Only the internal (Realtime and Arranger) parts are transposed.

SNG—Only the Recorder (Song) parts are transposed.

MID—Only the note messages received via the EM-50/30's MIDI IN connector are transposed. Select this setting if you want to play to a song you play back using an external sequencer (or your computer) without changing your fingering.

I-S—The internal (Realtime and Arranger) and Recorder Song parts are transposed.

I-M—The internal parts and the note messages received via MIDI IN are transposed.

S-M—The Song parts and the note messages received via MIDI IN are transposed.

ALL—All sections (internal, Recorder, and MIDI) are transposed.

PB Range (Pitch Bend Range)

(0~24, *Default*: 2) This parameter allows you to set the interval you obtain by pushing the BENDER/MODULATION lever fully to the left or to the right. You can set this parameter in semitone steps, with a maximum of 24 semitones (2 octaves), the default value being "2", which should be OK in most situations.

Note: Pitch Bend is only available for the Upper1, Upper2, and M.Drums parts. See also page 22.

DBeamCtr

(*Default*: 4) This parameter allows you to assign a function to the EM-50/30's D Beam Controller. Please note that not all functions are available at all times. This usually depends on whether or not certain Arranger parts can be accessed.

Note: If you plan to use the D Beam Controller while controlling the Arranger, it is probably a good idea to activate the Arr Mem function (see page 48).

One final note before we get down to the available parameters: all options marked with a "o" apply to the currently active Realtime parts.

1—Modulation^o—Select this function if you want the D Beam to duplicate the modulation function of the Bender/Modulation lever.

2—Pitch Bend Up^o—By moving your hand over the D Beam, you can bend the notes of the Realtime parts upward (make them sound higher). The extent to which a Realtime part can be controlled depends on the PB Range setting.

3—Pitch Bend Down^o—By moving your hand over the D Beam, you can bend the notes of the Realtime parts downward. The extent to which a Realtime part can be controlled depends on the PB Range setting (see above).

Note: In the case of the two Pitch Bend options, the D Beam value is added to the current setting of the Pitch Bend axis of the Bender/Modulation lever. But the sum of the D Beam and Pitch Bend values cannot exceed the Range setting.

4—Cut&Reso Up^o—(Only for Upper 1 and/or 2) By moving your hand over the D Beam, you can vary the filter setting of the Upper 1 and/or 2 part and make it sound brighter and more "synthesizer-like". This allows you to create some nifty filter effects that are particularly useful for Dance/Techno music. When you move your hand outside the D Beam's range, the Upper 1/2 part(s) return to normal.

Note: Some Tones already use the highest possible Cutoff value by default, in which case you cannot add more overtones (by opening the filter even further).

Note: See "Selecting the Upper 1 and/or 2 part(s)" on page 20 for how to specify which Upper part is affected by this setting.

5—Cut&Reso Down^o—(Only for Upper 1 or 2) By moving your hand over the D Beam, you can make the Upper 1/2 part(s) sound darker.

6, 7, 8—Arpeg 1/2/3 octaves—By moving your hand over the D Beam, you trigger arpeggios (broken chords) based on the notes you play in the left half of the keyboard (Arranger or Organ mode). Depending on the setting you select here, the notes of the left half will be arpeggiated over 1, 2, or 3 octaves. This function uses the Upper2 Part for playing these notes.

Note: If you do not change the On setting of the Arr Int parameter (see page 48), it is enough to play one note for major chords, two for minor chords, etc.

9, 10, 11—Chord 1/2/3 Octv—By positioning your hand inside the D Beam's range, you cause the EM-50/30 to sound the notes of the chords you play in the left half of the keyboard. You could use this function to add syncopated brass or guitar "hits" to your melody. The velocity value used for playing these

notes is "100". The number (1, 2, or 3) bears on the octave of this "added chord": 1= A₄3~G4, 2= A₄4~G5, and 3= A₅5~G6. Move your hand outside the D Beam's range to stop the chord. This function uses the Upper2 Part for playing these notes.

Note: If you do not change the On setting of the Arr Int parameter (see page 48), it is enough to play one note for major chords, two for minor chords, etc.

12, 13—Tempo Up/Down—Select one of these options if you want to increase (Up) or decrease (Down) the current Arranger or Recorder tempo. By moving your hand outside the D Beam's range, you return to the previous tempo value.

14—Arr Start/Stop—Depending on the current condition of the Arranger (running or stopped), one move inside the D Beam's range stops (or starts) it. A second movement will start (or stop) it again.

15—Fill To Var/Or—Here, too, the D Beam performs two functions that depend on the currently selected Division (Original or Variation). The first time the D Beam senses your hand (or other limb), it activates the Fill-In TO VARIATION function. Upon completion of that Fill, the Arranger switches to the Variation pattern. The second time, the Fill-In TO ORIGINAL is activated.

16—ADrum On/Off—This setting allows you to switch the A.Drums part on and off using the D Beam Controller. There are also combined on/off options (see below).

17—ABass On/Off—This setting allows you to switch the Arranger's bass part (of the currently selected Music Style) on and off using the D Beam Controller.

18—Accomp On/Off—This setting allows you to switch the Accompaniment parts (ACC1~6) on and off using the D Beam Controller.

19—ABs&ADr On/Off—This setting allows you to use the D Beam for switching on and off the A.Bass and A.Drums parts.

20—Acc&ABs On/Off—This setting allows you to use the D Beam for switching on and off the A.Bass and Accomp parts.

21—Acc&ADr On/Off—This setting allows you to use the D Beam for switching on and off the A.Drums and Accomp parts.

Arr Int (Arranger Chord intelligence)

(On/Off, Default: On) When switched on, EM-50/30's Chord Intelligence function allows you to play major chords by pressing just one key, minor chords by pressing two keys, and more complex chords by pressing three keys. See the end of this manual for a list of chords and how to play them when Arranger Chord Intelligence is on or off.

If you are used to playing full chords, you can switch this function off.

Note: This setting is ignored when you load a User Program while STYLE HOLD is active (see page 45).

Arr Mem (Arranger Chord Memory)

(On/Off, Default: On) The Arranger Chord Memory function memorizes the chords you play with your left hand and keeps playing the corresponding notes until you play another chord. (If Arr Int is on, you can play major chords by pressing just one key.)

In a way, this is like a Hold pedal, except that you do not need to press it. It is switched on every time you play a chord, and released (and then pressed again) as soon as you play another chord.

If you switch off Arr Mem, the melodic Arranger parts (M.Bass, Accomp) stop playing as soon as you release the key(s) in the left half of the keyboard, leaving you only with the drum accompaniment.

For your convenience, this function is switched on every time you power on the EM-50/30.

Note: This setting is ignored when you load a User Program while STYLE HOLD is active (see page 45).

LWR Int (Lower Chord Intelligence)

(On/Off, Default: Off) This function works exactly like Arr Int. This time, however, it applies to the notes you play in the left half of the keyboard when the Organ mode is selected. When switched on, EM-50/30's Lower Chord Intelligence function allows you to play major chords by pressing just one key, minor chords by pressing two keys, and more complex chords by pressing three keys.

LWR Mem (Lower Chord Memory)

(On/Off, Default: Off) The Lower Chord Memory function memorizes the chords you play with your left hand (Organ mode) and keeps playing the corresponding notes until you play another chord. If you need this Hold function for the Lower part (e.g. when playing organ music), switch it on.

RevType (Reverb Type)

(Default: HL2) Use this parameter to select the kind of Reverb that best suits your musical purposes. There are four major types (Room, Hall, Plate, and Delay) with one or several variations. The best way to find out more about them is to experiment.

Type	Explanation
RM1, RM2, RM3	These types simulate the Reverb characteristics of a room. The higher the number (1, 2, or 3), the "bigger" the room becomes.
HL1, HL2	These types simulate the Reverb of a small (1) or large (2) concert and thus sound far "bigger" than the RM types above.
PLT	Digital simulation of a metal plate that is sometimes used for creating Reverb effects. Works well for percussive sounds.
dY	A Delay effect (no Reverb). Works a lot like an echo effect and thus repeats the sounds.
PdY	Pan Delay. This is a stereo version of the preceding Delay effect. It creates repetitions that alternate between the left and right channels.

Please bear in mind that you will only hear the difference when the Reverb effect is on (REVERB ).

ChrType (Chorus Type)

(Default: CH3) This parameter allows you to specify the sound of the Chorus effect. We could try to describe them, but you will get a better idea by selecting one after the other. Flanger (FLN) or Feedback Chorus (FbC) can be interesting for guitar Tones.

Again, there are two echo effects: Short Delay (SdY) and Short Delay with Feedback (SdF). They are, however, much shorter than those available for the Reverb effect processor.

Note: Please bear in mind that you will only hear the difference when the Chorus effect is on (CHORUS ).

Scale C-Scale B (Scale Tune)

(+63~-64, Default: 0 for all notes) These parameters allow you to stray away from the usual semitone-interval scale (used in western music) by changing the pitch of the notes so as to accommodate other musical cultures or tuning methods (oriental, baroque music, etc.).

As you will notice, you can change the pitch of every note of one octave (C, C#, D, Eb, E...). The settings you make here apply to all notes of the same name (i.e. to every C, every C#, etc.). Most of the time, you will probably select the value "+50" or "-50" as they correspond exactly to half a semitone up or down (quarter tone). Other settings are possible, though.

Note: These Scale settings only apply to the Upper1 and Upper2 parts.

Song P1~Song P16

(On, MtN, MtA, Default: On) We already discussed these parameters while talking about the Recorder (see page 37).

Select "On" for a Song part you want to hear, and "MtN" or "MtA" for Song parts you wish to mute. The difference between "MtN" and "MtA" is of little importance for Song parts that are not linked to a Realtime part, so choose whichever you like.

The Song parts that have no link with the Realtime parts are: Song P1, 2, 5, 7~9, and 11~16.

Part Switches (U/S)

The following parameters are called "part switches" because they allow you to choose whether the settings contained in a Recorder song may affect the settings currently in effect (SNG) or whether the User Program or current panel settings (USP) should take precedence.

More specifically, you can choose to filter the following Song settings:

U/S MTun—(Default: SNG) This is the Master Tune filter. The Master Tune setting is usually absent in Standard MIDI Files. There is, however, another important aspect that makes this parameter very

meaningful indeed. Suppose you programmed a User Program with a Master Tune setting of 442Hz because the violin player you wish to accompany prefers that tuning. Pressing [◀◀] or simply starting play back of the Recorder would cause the Master Tune setting to revert to 440Hz (because that is the default setting), so that you suddenly sound hopelessly flat with respect to the violin.

If, however, you select "USP", your EM-50/30 remains tuned at 442Hz – provided you changed the Master Tune setting by hand or selected a User Program containing that Master Tune value.

U/S Rev and U/S Chr—(Default: SNG) These switches are filters for the Reverb and Chorus effects. Select "USP" here if you do not like the effect settings of the song you are playing back.

U/S UP1, UP2, LWR, MDR—These switches allow you to ignore the settings of the Song parts linked to the Realtime parts. In fact, these are the link switches between the Song parts and the assigned Realtime parts. Selecting "USP" breaks the link between the parts in question. See "Live performance with song backing (Minus One)" on page 37 for more information about these links.

The most important parameters that can be protected from unwanted modification are: volume (Balance), Pitch Bend Range, Chorus, Tone selection, and Scale Tune (only for Upper1 and Upper2). Remember that breaking the link is not enough, as that only means that the corresponding Song part settings will not be used. Don't forget to make your own desired settings, or load a suitable User Program.

Note: Though you can only activate or deactivate the Chorus for the Upper1, Upper2, Lower & M.Drums parts on the EM-50/30's front panel, the tone generator is capable of applying Chorus to any part. If the Standard MIDI File you play back contains such settings, they will be faithfully carried out in SNG mode.

Resume

This function allows you to recall the default settings of all Parameter mode functions (i.e. the ones in effect when you switch on your EM-50/30 without selecting a User Program). Press [ENTER] in response to the flashing "ENT" message to recall the default settings. If, at that time, a User Program is selected, the dashes appear below its address to indicate that your User Program has been edited.

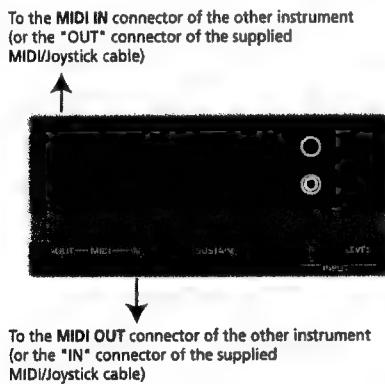
13. MIDI functions

MIDI is short for *Musical Instrument Digital Interface*. The word refers to many things, the most obvious being a connector type that is used by musical instruments and other devices to exchange messages relating to the act of making music. Every time you play on the EM-50/30's keyboard or you start the Arranger, your instrument will send MIDI data to its MIDI OUT port. If you connect this port to the MIDI IN port of another instrument, that instrument may play the same notes as one of the EM-50/30's parts.

Note: See the "MIDI Manual" file on the supplied CD-ROM (D:\ABOUT_ROLAND\MIDI\Midi_en).

MIDI is a universal standard, which means that musical data can be sent to and received by instruments of different types and manufacturers. Furthermore, MIDI allows you to connect your EM-50/30 to a computer or hardware sequencer.

Connect your EM-50/30 as follows:



Channels

MIDI can simultaneously transmit and receive messages on 16 channels, so that up to 16 instruments can be controlled. Nowadays, most instruments –like your EM-50/30– are multitimbrial, which means that they can play several musical parts with different sounds.

The EM-50/30 is equipped with an Arranger capable of playing the drums, the bass, and up to six accompaniment parts, while at the same time allowing you to play up to two Realtime parts (Upper1, Upper2).

Other controllers that can be used to play the EM-50/30 include trigger-to-MIDI instruments (TD-10, TD-7, TD-5, SPD-20, Octapad II), guitar-to-MIDI instruments (GR-30, GR-1, GR-09, GI-10) as well as any kind of "to MIDI" controller (wind, MCR-8 fader unit).

Note: All EM-50/30 parts are set to receive MIDI messages. If they do not seem to respond to the messages you send from the external controller, you should check whether the external controller's MIDI OUT is connected to the MIDI INput of your EM-50/30.

13.1 Editing the MIDI parameters (general procedure)

You can edit the EM-50/30's MIDI parameters via the display:

1. Press MENU **▲▼** to place the mode arrow (◀) next to the MIDI message.



The "ENT" message now flashes in the display.

2. Press [ENTER] to enter the MIDI mode.
3. Use the MENU **▲▼** buttons to select the parameter you wish to edit (see below).

*Note: If you selected this mode by mistake, press [CANCEL] to return to the MIDI message, use MENU **▲▼** to select another mode, and press [ENTER].*

4. Press [ENTER] to confirm your parameter selection.

The value or On/Off message to the left of the parameter name now flashes to signal that you can change ("edit") it.

5. Use the MENU **▲▼** buttons to modify the value of the selected parameter.

*Note: To return to the default value of the currently selected parameter, simultaneously press MENU **▲▼**.*

6. To leave the MIDI mode, press [CANCEL] several times until the "MIDI" message is displayed, then use MENU **▲▼**, followed by [ENTER] to select another mode.

Note: There is no need to save these settings as the EM-50/30 memorizes them automatically. To reset all MIDI parameter settings, use the Resume function (see page 53).

Parameters in Style mode

Here are the MIDI parameters you can set in Style mode (when the **SONG** icon is not displayed). This mode allows you to use the Arranger.

Receive (Rx) and Transmit (Tx) channels

Though it is perfectly possible to change the transmit and receive channels of all parts, we recommend you only do so if there is no other way to solve your MIDI problems. The default values correspond indeed to a tacit Roland standard and are therefore shared by all recent E, G, and RA series instruments. Besides, these settings guarantee perfect GM/GS compatibility.

Here are some of the parts whose MIDI channels you can set:

UP1	Upper 1
UP2	Upper 2
LWR	Lower (available in Organ mode)
MBS	M.Bass (available in Organ mode)
ADR	A.Drums (Arranger drum part)
ABS	A. Bass (Arranger bass part)
AC1-AC6	Melodic Arranger parts (that play chords or riffs)

TxRx means "MIDI transmit and receive channel". The setting range is 1~16 (the number represents the MIDI channel). Select "Off" if you don't want a part to receive or transmit MIDI messages.

RX1, RX2, RX3

(1~16, Off, Default: Off) Your EM-50/30 has three parts ("musicians") that can only be played via MIDI. That is, you cannot trigger them on the instrument itself – hence the name "RX" (receive). If you work with a sequencer or an external MIDI controller, however, these parts can be used for playing additional lines of your sequence.

At first (and everytime you initialize the EM-50/30's MIDI parameters using the Resume function), these parts are set to "Off" and therefore do not receive MIDI messages. You can, however, activate them by assigning them a MIDI channel. Be careful not to select a MIDI channel you have already assigned to other EM-50/30 parts. The channels you could use are: 13, 14, and 15, provided you select "Off" for NTA1, NTA2, and Basic Ch.

NTA1/2 Rx (Note-to-Arranger 1/2 Rx channel)

NTA is short for "Note-to-Arranger", or the notes you play in the left half of the keyboard to feed the Arranger with chord information. These notes can also be received via MIDI. If you want the Arranger to use these notes, you must transmit them on the MIDI channels assigned to the NTA function (from your computer or external MIDI instrument to the EM-50/30).

You probably noticed the plural in "channels". There are indeed two NTA receive channels so that you could use the EM-50/30 as realtime arranger module for a MIDI accordion or any other MIDI instrument capable of transmitting on two channels.

You could also take advantage of these two NTA channels to control the Arranger from two external master keyboards or a PK-5 MIDI bass pedal unit.

There is no Tx parameter for the NTA level. The notes you play on the EM-50/30's keyboard are indeed transmitted to the Arranger, from there to the Arranger parts, and used to play the accompaniment in the right key. Since all Music Style notes are trans-

mitted via MIDI, there is no need to send the NTA notes separately.

Before setting the (or just one) NTA receive channel, see the manual of your external MIDI controller to find out which channel(s) it transmits on.

Possible values: Off, 1~16 (may not be the same as NTA2). Default: 14 (NTA1) and 15 (NTA2).

Style Ch (Style Select TxRx Channel)

As its name implies, the Style Select channel is used to receive and transmit program changes that cause the EM-50/30 or the receiver to select another Music Style. Note that the Custom Style memories (and the EM-50's Disk User memory) can also be selected via MIDI.

Possible values: Off, 1 ~ 16. Default: 10.

Basic Ch (Basic TxRx Channel)

The Basic Channel is the MIDI channel used for receiving and transmitting Program Change and Bank Select messages relating to the selection of User Programs. In other words, every time you select a User Program on your EM-50/30, it will send a series of MIDI messages to the MIDI OUTput on the MIDI channel you select here.

Likewise, if the EM-50/30 receives a series of messages (Bank Select and Program Change) on the Basic Channel, it will select the User Program that is assigned to the numbers contained in the received MIDI messages.

Possible values: Off, 1 ~ 16. Default: 13.

MIDI data filters

The following parameters allow you to decide whether or not certain MIDI message types should be received and transmitted.

ProgChng (Program Change)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Program Change messages. These messages are used to select Tones, Styles, or User Programs.

Possible settings: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).

PitchBnd (Pitch Bend)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Pitch Bend messages. These messages are used to temporarily increase or decrease the pitch of the notes (Upper1, Upper2, or M.Drums parts).

Possible values: Off, On. Default value: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).



Modulatn (Modulation)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Modulation messages. These messages are used to add vibrato to the notes you play (control change CC01).

Possible values: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).

Volume—This filter allows you to enable (On) or disable (Off) the transmission and reception of volume messages (control change CC07).

Possible values: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).

Sustain (Hold)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Hold messages (control change CC64).

Possible values: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).

NRPN (Non-Registered Parameter Number)—This filter allows you to enable (On) or disable (Off) the transmission and reception of NRPN messages. These messages are only understood by GS compatible tone generators and allow you to edit certain parameter settings via MIDI.

Possible settings: Off, On. Default: Off.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).

Velo Rx (Receive Velocity)—This filter allows you to enable (On) or disable (Off) the reception of Velocity messages. The function of this parameter is identical to that of the [KEYBOARD VELOCITY] button but it only applies to note messages received via MIDI.

Possible settings: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 54).

Lyrics Tx (Transmit Lyrics messages)—The EM-50/30 is capable of transmitting Lyrics messages contained in Format 0 Standard MIDI Files you playback. It cannot display them but it allows you to transmit them to a device capable of displaying Lyrics messages (such as the Roland LVC-1). This filter allows you to enable (On) or disable (Off) the transmission of Lyrics data.

Possible settings: Off, On. Default: On.

Synchronization parameters

Sync Rx (MIDI Synchronization)

Use this parameter to specify how the EM-50/30 should be synchronized (as slave) to an external MIDI sequencer, computer, drum machine, etc. Synchronization is a learned term for the fact that one device (or function) is set to start and stop at the same time as another device (or function), and to run at the

same tempo (BPM). Please note that synchronization is only possible when you connect the external device's MIDI OUT port to the EM-50/30's MIDI IN port (though you can also work the other way around; in that case, see the sequencer's manual for details).



Int—In this case, the EM-50/30 is not synchronized with other MIDI devices. It is thus impossible to start/stop it via MIDI.

MId A—This synchronization mode does two things at a time: it synchronizes both Arranger playback and Song recording in response to Start/Stop and MIDI Clock messages. In fact, after pressing the [REC/2nd TRACK] button, you have to start the external device to cause the Recorder to start. At the same time, Arranger playback will be started, making this mode ideal for recordings involving both the Arranger and the EM-50/30's Recorder.

MId S—In this case, only the Recorder will be synchronized. This synchronization mode bears both on Recorder playback and recording, meaning that the Recorder can only be started with MIDI Clock messages received from an external unit. Also, the Song mode must be on (SONG). Furthermore, recording can only be started if you press the [REC/2nd TRACK] button to put the EM-50/30 in standby.

Note: The Recorder will only start when MIDI Clock messages are received in Song mode.

Aut A—Here, Arranger playback and Song recording are only synchronized if the EM-50/30 receives MIDI Start and Stop messages followed by MIDI Clock signals. If all the EM-50/30 receives is a Start message, it will wait a moment to see if there are also MIDI Clock messages coming. If there are, it will synchronize to them. If there are no MIDI Clock messages, it will follow its own tempo. In either case, you can stop playback or recording with a MIDI Stop message. The EM-50/30 thus "knows" when to synchronize to external MIDI Clock messages and when to follow its own tempo.

Aut S—See above. This time, however, the automatic synchronization applies to Song recording and playback. The Arranger will therefore neither start, nor synchronize to incoming MIDI Clock messages.

rEM A—The Arranger and Recorder wait for a start message to start playback or recording at its own tempo. As soon as the EM-50/30 receives a stop message, Arranger playback and/or Song recording will stop.

rEM S—This is the same as **rEM A**, except that it applies to Song playback and recording (and thus to the Song mode). The Arranger is not affected by Start/Stop messages received via MIDI.

Clock Tx

This option allows you to determine whether or not the Arranger and Recorder send MIDI Clock messages when you start them. These messages are necessary for synchronizing external MIDI instruments/sequencers/software to the EM-50/30.

Possible settings: Off, On. Default: On.

StrStpTx (Start/Stop/Continue)

(On/Off, Default: On) This option allows you to determine whether or not the Arranger and Recorder send Start/Stop/Continue messages when you start or stop them. Select "Off" when you wish to control the tone generator of a MIDI organ, etc., without starting its automatic accompaniment every time you start Arranger or Recorder playback on the EM-50/30.

Song Pos P (Song Position Pointer)

(On/Off, Default: On) The EM-50/30's Recorder also sends Song Position Pointer messages. Select Off if you don't want the Recorder to send these messages.

PartMute

(Int/All, Default: All) The Part Mute parameter allows you determine what happens when you mute a part (see page 24). One thing you know will happen is that the part in question no longer sounds when you play on the keyboard. What you do not see, however, is whether a muted part still sends MIDI data. *Part Mute* allows you to specify whether or not a muted part should go on sending MIDI messages to MIDI OUT:

Int—A muted part can no longer be played via the EM-50/30's keyboard or Recorder but continues to send MIDI messages to the MIDI OUTput.

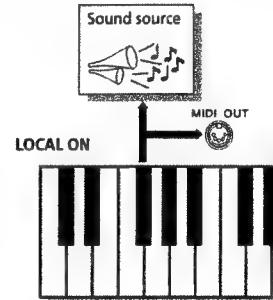
All—A muted part can no longer be played via the EM-50/30's keyboard or Recorder and no longer sends MIDI messages.

Default: All.

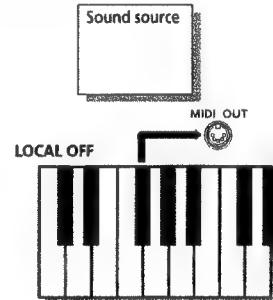
Local

(On/Off, Default: On) The Local parameter allows you to establish or remove the connection between the EM-50/30's keyboard/Recorder and the internal tone generator.

When set to *On* (factory setting), playing on the EM-50/30's keyboard or playing back a Recorder song will cause the corresponding notes to sound. If you select *Off*, the corresponding MIDI messages are no longer sent to the internal tone generator. Local doesn't, however, interfere with the transmission of the corresponding MIDI data to the MIDI OUTput.



Setting Local to *Off*, on the other hand, means that neither the keyboard nor the Recorder control the internal tone generator.



When working with a sequencer equipped with a Soft Thru (MIDI echo) function – and only if (i) you connect the EM-50/30's MIDI IN and OUT connectors to the external sequencer or computer, and (ii) use the EM-50/30 as MIDI master keyboard for sequencing – you may have to set this parameter to *Off* to keep the notes from sounding twice (producing an unpleasant sound called *MIDI loop*). In all other cases, select *On*.

Note: The setting of this parameter is not memorized when you switch the EM-50/30 off.

Resume

Select this function to recall the EM-50/30's factory MIDI settings (both for the Style and the Recorder modes). Press [ENTER]. After showing the "Complete" message, the display returns to the RESUME message. Press [CANCEL] to leave the MIDI mode.

Note: There is no "Sure?" question that gives you time to think. Only press [ENTER] if you are certain you want to recall ALL factory MIDI settings.

Dump Tx

See "Archiving your settings via MIDI (Dump TX)" on page 55.

MIDI in Song mode

Select the Song mode by pressing [STYLE/SONG] until the  icon appears. Except for the part names and their numbers (Part 1~16), the Song MIDI parameters are similar to those of the Style mode. Here, however, you can set the transmit and receive channels of the Recorder Song parts.

One final remark: by default, Song Part 1 is assigned to MIDI Channel 1, Song Part 2 to MIDI Channel 2, etc.

14. Archiving/loading settings

14.1 Archiving your settings via MIDI (Dump TX)

The EM-50/30 provides four functions you can use for transferring the EM-50/30's settings to another EM-50 or EM-30, or to a computer/sequencer.

In the case of the EM-30, these functions are the only way to archive your settings. So do take the time to read through the following.

About the Dump function

"Dump" (or *Bulk Dump*) is the term generally used for transferring special sets of MIDI data. As a rule, these data are only understood by the model in question. That is why these messages are called *System Exclusive* (or *SysEx* for short). The EM-50 and EM-30 are twins (with differences not related to the data structure), so that an EM-30 also accepts *SysEx*-messages from an EM-50, and vice versa.

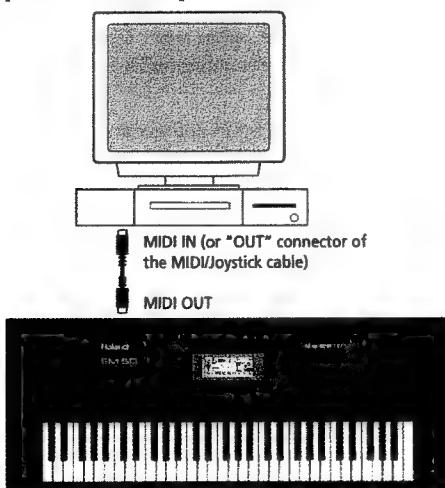
Sequencers (hardware or software) usually don't care what kinds of MIDI messages you record. You can therefore also record *SysEx* data. When you play back a song containing such data, the computer/sequencer transfers the data back to the EM-50/30. That, in turn, changes the contents of the selected memories

Note: The EM-50/30's Recorder cannot record SysEx messages.

Note: In the following "sequencer" refers to both hardware sequencers and computers with sequencer software.

Here is what you need to do to transfer your settings to a sequencer/computer:

1. Connect the EM-50/30's MIDI OUT port to the sequencer's MIDI IN port.



Note: If you also connect the EM-50/30's MIDI IN port to the sequencer's MIDI OUT port, be sure to switch off the sequencer's Soft Thru (or MIDI Echo) function. See its manual for details.

2. Select the Dump TX function:

- Press MENU **▲▼** to place the mode arrow (◀) next to the MIDI message. The "ENT" message now flashes in the display.
- Press [ENTER] to enter the MIDI mode.
- Use the MENU **▲▼** buttons to select the DUMP TX parameter.



TEST DUMP TX

- Press [ENTER] to confirm your parameter selection. The setting to the left of the parameter name now flashes to signal that you can change ("edit") it.

3. Use the MENU **▲▼** buttons to select the desired setting:

CST—The contents of the 8 Custom Style memories (see page 16) will be transferred to the sequencer. You should do this before loading new Custom Styles (see page 56).

USP—The contents of the 64 User Programs will be transferred to the sequencer.

SNG—The Song currently in the EM-50/30's RAM memory will be transferred to the sequencer.

Note: In some rare cases, the song you wish to transfer may be too big and cannot be dumped to an external instrument. In that case the message IMPOSSIBLE is displayed (it means "Impossible").

PRG—The EM-50/30's operating system will be transferred to the sequencer. Do this before updating your EM-50/30. See also page 61.

Note: This function may not be supported by certain software sequencers.

4. Start recording of your sequencer.

For best results, set the sequencer's tempo to a value between $J = 100\sim120$.

5. Press the [ENTER] button on the EM-50/30.



- The display now asks you for a confirmation (Sure?), so press [ENTER] again.

7. Wait until the display tells you Complete, then stop the sequencer.

8. Save your new sequencer song to floppy or hard disk.

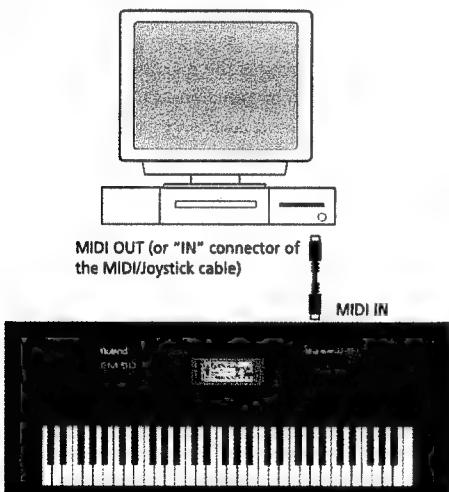
Try to save it under a clear name (example: *UserProg EM 2/4/99*). That way, you know exactly which file you need to transfer back to the EM-50/30 at a later stage.

9. To leave the MIDI mode, press [CANCEL] several times until the "MIDI" message is displayed, then use MENU ▲▼, followed by [ENTER] to select another mode.

Transmitting archived/new data to the EM-50/30

Transferring your dumped settings back to the EM-50/30 is relatively easy and requires no special actions on your Creative Keyboard. Do note, however, that the settings you transfer back to the EM-50/30 will overwrite the current settings in that memory area (Custom Styles, User Programs or Song).

1. Connect the EM-50/30's MIDI IN port to the sequencer's MIDI OUT port.



2. Stop Arranger (or Song) playback on the EM-50/30 and dump the settings and dump the internal settings you do not wish to lose to the sequencer (see page 55).

3. Start the sequencer and load the file you wish to transfer to the EM-50/30.

For best results, set the sequencer's playback tempo to a value between $J = 100\sim120$.

4. Start playback on your sequencer.

As soon as the first data arrive, the display indicates the following:

CST Sys 34%

SYS means that the EM-50/30 is receiving SysEx messages (that are only understood by the EM-50 or EM-30). The display will also inform you about the data type being received: *Custom Styles* (for all 8 memories; CST), *User Programs* (for all 64 memories; USP) or a *song* (SNG).

5. Wait until the Complete message appears, then stop playback on your sequencer.

6. Try out your freshly loaded settings to see if they work as expected.

Possible error messages during the reception of Bulk data

As SysEx data are rather delicate data (the slightest data error will make the entire bulk unusable), there may be situations where receiving these data does not work out as planned. Here are the error messages that could be displayed. Note that you need to switch off the EM-50/30 and try again if one of these messages is displayed.

File Err—These data are probably not for the EM-50/30 because it cannot read them.

CSum Err—Checksum error. The checksum does not correspond to the data contained in the SysEx string. This probably only happens when someone has tampered with the data on a computer, etc.

ID Err—Wrong Model ID. Every instrument has a Model ID that says "I am an EM-50 or EM-30". This ID number is also included in SysEx data (and then means "this is only for an EM-50 or EM-30"). If the EM-50/30 received Bulk data for, say, a JX-305 ("this is only for a JX-305"), the EM-50/30 would respond with "but I am an EM-50/EM-30", and would turn down the data.

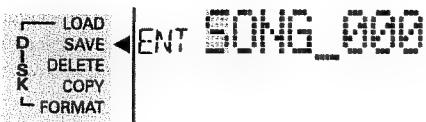
Long Sys—The SysEx string is too long and cannot be received. Again, this is only likely to occur when someone programmed the SysEx data by hand (which is perfectly possible, by the way). This message should not appear for data you dumped from the EM-50/30 itself (see page 55).

Addr Err—Wrong SysEx address. Every parameter of a SysEx string has an address that informs the receiver about its nature (e.g. "I am the Cutoff parameter..."). This error message means that the EM-50/30 received an address that does not exist.

Rx Fault—The reception doesn't seem to work according to plan. Check the cable connections, or use another MIDI cable.

Flsh Err—Flash Memory Error. There is a problem with the Flash ROM memory which is used by the Custom Music Styles. Contact your Roland dealer, or local distributor.

OvRunErr—Framing error/Buffer overrun. The SysEx data were transmitted too fast for the EM-50/30. Slow down the playback tempo of your "song" and try again.



(Here, we selected the "SAVE Sng" option).

You could save the file with the current default name (SONG_001, CUST_000, or USPR_000). A proper name, though, will help you identify the file at all times. We therefore suggest you take the time to specify a meaningful name.

The "S" and the "■" alternately flash in the display to indicate that you can enter a character for this position.

6. Use the MUSIC STYLE/USER PROGRAM program buttons for selecting the character you wish to assign to this position.

You may have to press the button in question several times to select the desired character. The following characters are available:

-	!	#	\$	%	&	?	-	@	^	‘
0	1	2	3	4	5	6	7	8	9	
A	B	C	D	E	F	G	H	I	J	K
L	M	N	O	P	Q	R	S	T	U	V
W	X	Y	Z							

Note: The cursor jumps automatically to the next position whenever you press a different button than the one you pressed before. For characters that are assigned to the same button, you need to move the cursor using the MENU ▲▼ buttons.

Note: If you select "SPACE" ([CUSTUM/HOLD] button), the display will insert a ". This because MS-DOS® does not allow you to use spaces.

7. If necessary, use the MENU ▲▼ buttons to move the cursor to the next position.

8. Repeat steps (6) and (7) to enter the remaining characters.

9. Press [ENTER] to save the file to disk.

The display now responds with the message **Saving** as well as a flashing disk icon (). When the song is saved, the **Complete** message appears.

If the message **Disk Prot** appears, you forgot to switch off the disk's Write protection. Press the **EJECT** button of the disk drive, remove the floppy and close the tab, insert the disk again and press [ENTER].

10. Press [CANCEL] several times to select another mode.

If you keep holding [CANCEL], the display will automatically jump to the first **Save** page.

Possible error messages

No Disk—You forgot to insert a floppy disk into the drive.

Disk Prot—See above.

Disk Full—The remaining disk capacity does not allow to save your data to this disk.

Disk Err—The disk is probably damaged and cannot be used.

Empty—There is no Recorder song in the EM-50's internal memory. Consequently, there is nothing to save.

Impssble—The song in the EM-50's memory is bigger than the RAM actually supports, and can therefore not be saved to disk. (This is because the EM-50 only loads specific blocks for playback.)

OverWrt?—The name you assigned to the data already exists on the floppy disk you inserted. If you press [ENTER] to continue, the file on disk will be overwritten (and the corresponding data will be erased). Either insert another floppy disk, or press [CANCEL] and enter another name for the data you want to save.

Deleting files on disk

The Delete functions allow you to delete a file from the inserted floppy disk. This may be necessary to make room for a new file (e.g. when the "Disk Full" message appears). Be careful, though, to only delete files you are absolutely (positively) sure you will never need again. Once a file has been deleted, it is gone forever.

Note: As a rule, you should first make a backup copy of your disk (see page 59). After all, files really only become indispensable once they are no longer available...

DEL Sng—This allows you to delete a song file on disk.

DEL UPr—Use this function to delete a User Program file from disk. Be aware that by doing so, you actually erase 64 User Program settings.

DEL CSt—This function allows you to delete a Custom Style Set file from disk. Like for User Program files, this actually means that you will erase eight Music Styles.

1. Insert the disk with the file you want to delete into the drive.

2. Press MENU ▲▼ to place the mode arrow (◀) next to the **DELETE entry.**



The display now responds with **DELETE**. The ENT message to its left flashes.

ENT DELETE

3. Press the [ENTER] button.

4. Use the MENU ▲▼ buttons to select **DEL Sng, **DEL UPr**, or **DEL CSt**.**

5. Press [ENTER] again.

6. Use the MENU **▲▼** buttons to select the file you want to delete (example: "USPR_000").

The ENT message and the file number flash alternately.

7. Press the [ENTER] button.

To be on the safe side, the EM-50 now asks you whether you really want to delete the file (Sure?).

8. Press [ENTER] to delete the file, or [CANCEL] to abort the operation.

If you pressed [ENTER], the display now shows the message **Deleting**. Once the data have been deleted, the **Complete** message briefly appears.

9. Press [CANCEL] several times to select another mode.

If you keep holding down [CANCEL], you will automatically return to the first **Delete** page.

Possible error messages

No Disk—You forgot to insert a floppy disk into the drive.

Disk Prot—You forgot to switch off the disk's Write protection. Press the EJECT button of the disk drive, remove the floppy and close the tab, insert the disk again and press [ENTER]. See also page 34.

Disk Err—The disk is probably damaged and cannot be used.

No Files—The disk contains no files of the selected type. Insert another disk.

DiskCopy (Copying the contents of an entire disk)

This function allows you to make backup copies of important disks.

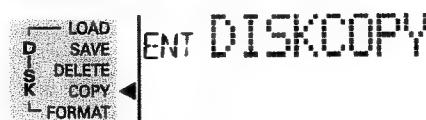
WARNING: The Disk Copy function uses the RAM memory and erases the EM-50's Recorder song and its Disk User memory. Before using Disk Copy, save your song to disk if you haven't already done so (see page 57).

Disk Copy copies all files of the *Source* disk (see below) to the *Destinat* disk.

1. Press MENU **▲▼** to place the mode arrow (◀) next to the **COPY** entry.



The display now looks as follows:



2. Press the [ENTER] button.

The EM-50 now tells you something you already know but may tend to forget at times:

**IMPROPER USE OF COPY INFRINGES
COPYRIGHT!! FOR PERSONAL BACK-UP
USE ONLY! SONG AND USER STYLE
WILL BE ERASED.**

Copying Songs from commercially available Standard MIDI Files is OK as long as *you keep the copy* (as safeguard against possible disk errors). Under no circumstances, however, may you give copies of copyright-protected material to your friends.

Also, the display tells you that the Disk Copy function needs the available RAM memory – i.e. the memory set aside for the Recorder song and for the Disk User Style. Be aware that really activating the Disk Copy function (which you haven't done so far), erases the song in the internal memory. Save it to disk before proceeding.

The above message is followed by the **Sure?** question.

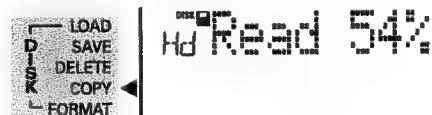
3. If you are sure you wish to make a backup copy of a disk, press [ENTER].

The display now asks you to insert the original (or *Source*) disk into the drive.

Before doing so, you must write-protect it, otherwise the display tells you to do so (**No Prot.**). In that case, remove the disk from the drive, set its Write Protect tab to the PROTECT position ("to open the little window"), and insert the disk into the drive again.

4. Insert the original (*Source*) disk into the drive.

The display now tells you that your EM-50 is reading the first part of the data to be copied (**Read 54%**). Depending on the number of files on disk, you may encounter this message several times. Note also the indication of the disk type (in our example, the *Source* disk is a 2HD floppy):



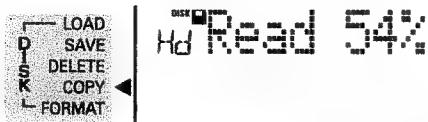
When the first part is loaded, the display switches to the **Destinat** message.

The message asks you to insert a blank disk into the disk drive. That disk will contain a copy of the original data. Be sure to use a disk of the same type. If the "Source" disk is a 2DD type, use a blank 2DD disk, otherwise use a blank 2HD disk. Failure to use the right disk type will result in the **INCOMPAT** being displayed.

5. Remove the Source disk from the drive and insert the Destination disk.

If the Destination disk isn't formatted, you are given the opportunity to do so now ("Format?").

Next, the following message appears to inform you that the first (or entire) data chunk is being copied to disk.



As stated above, the Source message may be displayed again. If so...

6. Remove the Destination disk from the drive and proceed with step (4) until the display tells you Complete.

The display now returns to the Disk Copy message.

Possible error messages when using Disk Copy

No Prot—The Source disk is not protected. Remove it from the drive and set the Write Protect tab to the PROTECT position.

NoFormat—The Destination disk is not formatted. Press [ENTER] to format it and to continue.

DiskErr—The disk is probably damaged and cannot be used.

DiskProt—The Destination disk is write-protected. Remove it and disable the protection.

Incompat—See above.

Format

See page 34.

SysSave: Saving the EM-50's operation system to disk

Both the EM-50 and the EM-30 allow you to update their operating system. New system versions may be available at your Roland dealer (ask your Roland dealer for details). There is no guarantee, however that there will ever be a new version. If there is, you should save the EM-50/30's current system version before loading the new one. The EM-50 allows you to do so either via MIDI or using a floppy disk. The EM-30 only supports MIDI transfer of the system data (see "Archiving your settings via MIDI (Dump TX)" on page 55).

Here is how to save the EM-50's system to a floppy disk:

1. Switch off the EM-50, wait a few seconds, then hold down TONE/ONE TOUCH [6] while switching the EM-50 back on again.

The display now shows the **SysSave** message, followed by **InsertDsk**.

2. Insert an MS-DOS® formatted 2HD disk into the drive and wait until the **Save xxx% message is displayed.**

3. Wait until the **Complete message is displayed, then eject the disk and store in a safe place.**

SysLoad: Updating the EM-50's system from disk

The EM-50/30's system can be updated from floppy or via MIDI (see page 61). As stated above, there may never be a new system version. You may, however, want to stop by your Roland dealer at regular intervals to check this.

Note: Before updating the operating system, be sure to save your User Programs, Custom Styles, and song to disk (see page 57). Updating the system version indeed erases the entire contents of the internal memory. Also, do not forget to make a backup of the current system version. You may need it if turns out the new version doesn't work (see above).

If you do get such a disk, here is how to transfer the data to your EM-50:

1. Switch off the EM-50, wait a few seconds, then hold down TONE/ONE TOUCH [8] + [METRONOME] while switching the EM-50 back on again.

The display now shows the **SysLoad** message, followed by **InsertDsk**.

2. Insert the disk with the new system version into the drive and wait until the **EM50_100 message is displayed.**

The figure after the "_" represents the version. The above message refers to system version "1.00". Newer versions will have higher numbers, such as "1.04", "1.05", etc. – if they are ever released.

The next message is **CSum**. It means that the EM-50 is checking the checksum of the SysEx data (remember those?).

The next two messages, **Load** and **F1sh**, indicate that the data are being read from disk and that the Flash ROM (the memory where the operating system resides) is being updated.

3. Wait until the **Complete** message is displayed, then switch off the EM-50.

4. Hold down the **[WRITE]** button while switching the EM-50 back on. This will initialize it.

5. Eject the disk and store in a safe place.

Possible error messages when using SysLoad/SysSave

The following messages will abort the SysLoad or SysSave operation. You thus need to repeat the entire procedure if you manage to cure the problem or obtain another disk.

CSumErr—The checksum of the SysEx data is incorrect. Ask your Roland dealer for another disk.

SysErr—A system error occurred. Try again, possibly with another disk.

WRProt—The disk is write-protected. Disable its protection.

DskErr—The disk is probably damaged and cannot be used.

DskFull—The remaining disk capacity does not allow to save your data to this disk. This message is only displayed when you are trying to use a 2DD floppy rather than a 2HD one for saving the operating system.

NoDisk—You forgot to insert a floppy disk.

NoFile—The disk you inserted doesn't contain an operating system file. Insert the correct disk.

For best results, use a computer with Cubase of Audio Logic.

2. Switch off the EM-50/30, wait a few seconds, then hold down **TONE/ONE TOUCH [7]** + **[METRONOME]** while switching the EM-50/30 back on again.

The display now shows the **UpDate** message.

3. Start the sequencer and load the file you wish to transfer to the EM-50/30.

4. Start playback on your sequencer.

As soon as the first data blocks arrive, the display will show a **UpDl xxx%** message.

5. Wait until the **Complete** message is displayed, then switch off the EM-50/30.

6. Hold down the **[WRITE]** button while switching the EM-50/30 back on. This will initialize it.

ENGLISH

14.4 Initializing your EM-50/30 (Factory)

After working extensively with your EM-50/30, you may want to recall the original factory settings. This is not indispensable because you could use the Resume functions in Parameter and MIDI modes to restore the original Parameter and MIDI settings. Initializing your EM-50/30 means that all User Program, Parameter, and MIDI settings will be replaced with the original settings – except for the Recorder song that will be empty after initializing your EM-50/30.

Here is how to initialize your EM-50/30:

1. Power off your EM-50/30.

2. Hold down the **[WRITE]** button while turning your EM-50/30 back on again.

The message **Factory!** will inform you that the EM-50/30 has been initialized.

14.3 Updating the EM-50/30's operating system via MIDI

The other way of updating the EM-50/30's operating system is to do so via MIDI. In the case of the EM-30, this is your only option. If you work with an EM-50, you may prefer to use the SysSave function (see page 60) because it's faster.

Note: Before updating the operating system, be sure to archive your User Programs, Custom Styles, and song to disk (see page 57) or via MIDI (see page 55). Updating the system version indeed erases the entire contents of the internal memory. Also, do not forget to make a backup of the current system version. You may need it if turns out the new version doesn't work.

1. Connect the EM-50/30's MIDI IN port to the sequencer's MIDI OUT port.

15. Specifications

EM-50/30 Creative Keyboard

General

Keyboard—61 keys, velocity sensitive

Display—Custom graphic display (backlit)

Output Power—2x 10W, two-way bass reflex speaker system

Memories—64 User Programs (with Style Hold), 8 Custom Style memories (Flash ROM)

Disk drive—(EM-50 only) Save & Load User Programs, Custom Style Sets, Song (save only), Operating system

Modes—Arranger, Whole Upper, Organ, M.Drums

Sound source

Tone generator—GM/GS compatible, 354 Tones, 12 Drum Sets (8MB worth of PCM samples)

Polyphony—24 voices, 16 multitimbral parts

Music Styles

ROM—64 Music Styles with Style Progression (6 levels) & Style Morphing (6 steps)

One Touch—8 One Touch memories (automatic registrations) per Style

Disk User—1 memory (RAM, EM-50 only).

Custom Styles—8 (Flash ROM)

Controllers

D Beam Controller

Bender/Modulation lever

Connections

Output—L/Mono, R (1/4" phone jack)

Input—RCA/phono (L, R) with LEVEL control

Headphones—2 (1/4" phone jacks)

MIDI—IN, OUT (MIDI/Joystick cable supplied for direct hookup to PC)

Dimensions (W x D x H)

1016 x 400 x 142 mm

(40 x 15 3/4 x 8 5/8 inch)

Weight

EM-50: 8.5kg (18.7 lbs)

EM-30: 8 kg (17.6 lbs)

Power supply

ACJ adapter (included)

Supplied accessories

Owner's Manual, ACJ adaptor, MIDI/Joystick cable, multilingual CD-ROM (PC)

Options

RH series headphones

DP-2, DP-6, or BOSS FS-5U footswitch

KS-12 keyboard stand

Music Rest

Note: Specifications subject to change without prior notice.

Charts

Tones

PIANO

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
A11	01 00	0,1,2	2	2	'Piano 1	1
A11 ₁	08	0,1,2	2	2	Piano1w	1
A11 ₂	16	0,1,2	2	2	'Pianold	1
A11 ₃	41 64	0	0	2	^AcPiano	2
A12	02 00	0,1,2	2	2	'Piano 2	1
A12 ₁	08	0,1,2	2	2	Piano2w	1
A12 ₂	41 65	0	0	2	^BrPiano	2
A13	03 00	0,1	1	1	Piano 3	1
A13 ₁	08	0,1	1	1	Piano 3w	1
A14	04 00	0,1	1	1	HonkTnk	2
A14 ₁	08	0,1	1	1	HonkTnkw	2
A15	05 00	0,1	1	1	E.Piano1	1
A15 ₁	08	0,1	1	1	DetunEP1	2
A15 ₂	16	0,1	1	1	EPiano1v	2
A15 ₃	24	0,1	1	2	60'Piano	2
A15 ₄	08	2	2	2	S6tEP	2
A16	06 00	0,1	1	1	E.Piano2	1
A16 ₁	08	0,1	1	1	DetunEP2	2
A16 ₂	16	0,1	1	1	EPiano2v	2
A16 ₃	16	2	2	2	StFMEP	2
A16 ₄	42 66	0	0	2	^EPiano3	2
A17	07 00	0,1	1	1	Harpsi	1
A17 ₁	08	0,1	1	1	CouplHps	2
A17 ₂	16	0,1	1	1	Harpsi.w	1
A17 ₃	24	0,1	1	1	Harpsi.o	2
A18	08 00	0,1	1	1	Clav	1

CHROMATIC PERCUSSION

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
A21	09 00	0,1	1	1	Celesta	1
A22	10 00	0,1	1	1	Glocken	1
A23	11 00	0,1	1	1	MusicBo	1
A24	12 00	0,1	1	1	Vib	1
A24 ₁	08	0,1	1	1	Vibw	1
A25	13 00	0,1	1	1	Marimba	1
A25 ₁	08	0,1	1	1	MaximbaW	1
A26	14 00	0,1	1	1	Xylophon	1
A27	15 00	0,1	1	1	Tub-bell	1
A27 ₁	08	0,1	1	1	ChurcBel	1
A27 ₂	09	0,1	1	1	Carillon	1
A28	16 00	0,1	1	1	Santur	1

ORGAN

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
A31	17 00	0,1	1	1	Organ 1	1
A31 ₁	01	0,1	1	1	Organ101	1
A31 ₂	08	0,1	1	2	DetunOrg1	2
A31 ₃	09	0,1	1	1	Organ109	2
A31 ₄	16	0,1	1	1	60'sOrg1	1
A31 ₅	17	0,1	1	1	60'sOrg2	1
A31 ₆	18	0,1	1	1	60'sOrg3	1
A31 ₇	32	0,1	1	1	Organ 4	1
A31 ₈	33	0,1	1	2	EvenBars	2
A31 ₉	08	3	3	2	TrOrgan	2
A32	18 00	0,1	1	1	Organ 2	1
A32 ₁	01	0,1	1	1	Organ201	1
A32 ₂	08	0,1	1	2	DetunOr2	2
A32 ₃	32	0,1	1	1	Organ 5	1
A33	19 00	0,1	1	1	Organ 3	2
A33 ₁	08	2	2	1	RgOrg	1

A33₂ 48 65 0 0 ^OrgChrd 1

A33₃ 52 65 0 0 ^LFOrgan 2

A33₄ 49 64 0 0 ^60sOrgn 1

A34 20 00 0,1 1 Church1 1

A34₁ 08 0,1 1 Church2 2

A34₂ 16 0,1 1 Church3 2

A35 21 00 0,1 1 Reed_Org 1

A36 22 00 0,1 1 AccordFr 2

A36₁ 08 0,1 1 Accordit 2

A36₂ 00 2 2 AccrditF 1

A37 23 00 0,1 1 Harmonic 1

A37₁ 01 0,1 1 Harmonic2 1

A38 24 00 0,1 1 Bandneon 2

A38₁ 00 2 2 Bandeon 1

GUITAR

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
A41	25 00	0,1	1	1	NylonGtr	1
A41 ₁	08	0,1	1	1	Ukulele	1
A41 ₂	16	0,1	1	1	NylonGto	2
A41 ₃	24	0,1	1	1	VeloHarm	1
A41 ₄	32	0,1	1	1	NylonGt2	1
A41 ₅	32	3	3	3	NylnGt2	1 VSW
A42	26 00	0,1,3	3	3	StBrGt	1
A42 ₁	08	0,1	1	1	12-strGt	2
A42 ₂	09	0,1	1	1	Nyl+Stel	2
A42 ₃	16	0,1	1	1	Mandolin	1
A42 ₄	32	0,1	1	1	SteelGt2	1
A43	27 00	0,1	1	1	Jazz Gtr	1
A43 ₁	08	0,1	1	1	HawaiGt	1
A44	28 00	0,1	1	1	CleanGtr	1
A44 ₁	08	0,1	1	1	ChorusGt	2
A44 ₂	09	2	2	2	JCBGt	2
A45	29 00	0,1	1	1	MutedGtr	1
A45 ₁	08	0,1	1	1	FunkGtr	1
A45 ₂	16	0,1	1	1	FunkGtr2	1 VSW
A46	30 00	0,1,2	2	2	OvdrvGt	1
A47	31 00	0,1,2	2	2	DstBtG	1
A47 ₁	08	0,1	1	1	FeedbGtr	2
A48	32 00	0,1	1	1	GtrHarmo	1
A48 ₁	08	0,1	1	1	GtrFeedb	1
A48 ₂	16	0,1	1	1	AcGtHarm	1
A48 ₃	60 64	0	0	0	^AcGtr1	2
A48 ₄	60 68	0	0	0	^WahGtr	1

BASS

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
A51	33 00	0,1	1	1	AcouBass	1
A52	34 00	0,1	1	1	FingBass	1
A53	35 00	0,1	1	1	PickBass	1
A54	36 00	0,1	1	1	Fretless	1
A55	37 00	0,1	1	1	Slap Bs1	1
A56	38 00	0,1	1	1	Slap Bs2	1
A57	39 00	0,1	1	1	SynthBs1	1
A57 ₁	01	0,1	1	1	SyBass101	1
A57 ₂	08	0,1	1	1	SyBass 3	1
A57 ₃	09 66	0	0	0	^DstTB2	2
A57 ₄	09 68	0	0	0	^AcTB2	2
A57 ₅	13 68	0	0	0	^JPMGBas	2
A57 ₆	13 69	0	0	0	^ClockBas	2
A57 ₇	13 71	0	0	0	^OscBass	2
A57 ₈	09 64	0	0	0	^NormalTB	1
A57 ₉	09 64	0	0	0	^DistTB1	1
A57 ₁₀	14 64	0	0	0	^ResoBas	1

A57b	14	65	0	0	^WowMGBs	2	• A82	58	00	0,1	1	Trombone	1
A57c	14	66	0	0	^Wow10B	2	• A82i	01	0,1	1	1	Trombone2	2
A57d	14	67	0	0	^SwpWowB	2	• A83	59	00	0,1	1	Tuba	1
A57e	14	68	0	0	^MG5thBs	2	• A84	60	00	0,1,2	2	MitedTp	1
A57f	10	66	0	0	^101Bas1	1	• A85	61	00	0,1	1	Fr Horn	2
A58	40	00	0,1	1	SynthBs2	2	• A85i	01	0,1	1	1	Fr Horn2	2
A58i	01	0,1	1	1	SyBas201	2	• A86	62	00	0,1	1	Brass 1	1
A58s	08	0,1	1	1	SyBass 4	2	• A86i	08	0,1	1	1	Brass 2	2
A58s	16	0,1	1	1	RubrBass	2	• A86s	63	64	0	0	Br&Str	2
A58s	10	64	0	0	^101Bas1	1	• A86s	63	65	0	0	^SBrass	2
A58s	10	69	0	0	^DubBas	2	• A87	63	00	0,1	1	SyBrass1	2
A58s	12	67	0	0	^MGBass4	2	• A87i	08	0,1	1	1	SyBrass3	2
A58s	13	67	0	0	^MGBass5	1	• A87s	16	0,1	1	1	AnBrass1	2
A58s	12	65	0	0	^MGBass2	1	• A87s	66	69	0	0	^StckBrs	2
A58s	12	68	0	0	^PMSuprB	1	• A87s	66	71	0	0	^StrBras	2
A58s	12	69	0	0	^CheesBs	1	• A88	64	00	0,1	1	SyBrass2	2
A58s	14	69	0	0	^DoomBas	2	• A88i	08	0,1	1	1	SyBrass4	1
A58s	14	71	0	0	^RubrBs2	2	• A88s	16	0,1	1	1	AnBrass2	2
A58s	15	64	0	0	^AcidBas	2							
A58s	15	65	0	0	^BubbleB	2							

ORCHESTRA

	GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
• A61	41	00	0,1	1	Violin	1	
• A61i	08	0,1	1	1	SlViolin	1	
• A62	42	00	0,1	1	Viola	1	
A63	43	00	0,1	1	Cello	1	
• A64	44	00	0,1	1	Contrabs	1	
• A65	45	00	0,1	1	TremoStr	1	
• A66	46	00	0,1	1	Pizzicat	1	
• A67	47	00	0,1	1	Harp	1	
• A68	48	00	0,1	1	Timpani	1	

ENSEMBLE

	GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
• A71	49	00	0,1	1	Strings	1	
• A71i	08	0,1	1	1	Orchestr	2	
• A71s	29	64	0	0	^RStrng1	2	
• A71s	29	65	0	0	^RStrng2	1	
• A72	50	00	0,1	1	SlowSr	1	
• A72i	32	64	0	0	^SlowStr	1	
• A73	51	00	0,1	1	Syn Str1	1	
• A73i	08	0,1	1	1	SyStrng3	2	
• A73s	30	64	0	0	^AuhStr	2	
• A74	52	00	0,1	1	Syn.Str2	2	
• A74i	30	68	0	0	^SynStr3	1	
• A75	53	00	0,1	1	ChoirAah	1	
• A75i	32	0,1	1	1	ChoirA2	1	
• A76	54	00	0,1	1	VoiceOoh	1	
• A77	55	00	0,1	1	SynVox	1	
• A77i	35	66	0	0	^Synvox1	1	
• A77s	35	74	0	0	^Noisvox	2	
• A77s	35	67	0	0	^Auh	1	
• A77s	35	70	0	0	^AuhAuh	2	
• A78	56	00	0,1	1	Orch Hit	2	
• A78i	22	65	0	0	^OctStck	2	
• A78s	22	66	0	0	^SynStck	2	
• A78s	77	70	0	0	^DistHit	1	
• A78s	22	64	0	0	^SynStck	1	
• A78s	22	67	0	0	^SawStck	2	
• A78s	77	73	0	0	^SpcFrg	2	
• A78s	23	64	0	0	^SynSB1	1	
• A78s	23	65	0	0	^SynSR2	2	
• A78s	23	67	0	0	^DirtySB	2	
• A78s	76	66	0	0	^MG Blip	1	

BRASS

	GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
A81	57	00	0,1	1	Trumpet	1	
• A81i	01	0,1	1	1	Trumpet2	1	
• A81s	08	2	2	2	FlgHorn	1	

REED

	GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B11	65	00	0,1,2	2	1	SopSax	1
B12	66	00	0,1	1	1	Alto Sax	1
B12i	09	2	2	2	1	AltoSax2	1
B13	67	00	0,1	1	1	TenorSax	1
B13i	01	2	2	2	1	TenrSax2	1
B13s	08	3	3	3	1	BrathT	2
B14	68	00	0,1	1	1	BaritSax	1
B15	69	00	0,1	1	1	Oboe	1
B16	70	00	0,1	1	1	EnglHorn	1
B17	71	00	0,1	1	1	Bassoon	1
B18	72	00	0,1	1	1	Clarinet	1

PIPE

	GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B21	73	00	0,1	1	1	Piccolo	1
B22	74	00	0,1	1	1	Flute	1
B22i	70	66	0	0	0	^PipeLd1	2
B22s	70	67	0	0	0	^PipeLd2	2
B23	75	00	0,1	1	1	Recorder	1
B24	76	00	0,1	1	1	PanFlute	1
B25	77	00	0,1	1	1	BotBlow	2
B26	78	00	0,1	1	1	Shakuhac	2
B27	79	00	0,1	1	1	Whistle	1
B28	80	00	0,1	1	1	Ocarina	1

SYNTH LEAD

	GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B31	81	00	0,1	1	1	Square W	2
B31i	01	0,1	1	1	1	Square	1
B31s	08	0,1	1	1	1	SineWave	1
B31s	03	66	0	0	0	^PR5Squ1	1
B31s	03	64	0	0	0	^TrLead1	1
B31s	01	67	0	0	0	^LeadTB3	2
B31s	07	65	0	0	0	^SwpLead	2
B31s	07	66	0	0	0	^Vocordm	2
B31s	08	64	0	0	0	^4tLead1	2
B31s	08	65	0	0	0	^4tLead2	2
B32	82	00	0,1	1	1	Saw Wave	2
B32i	01	0,1	1	1	1	Saw	1
B32s	08	0,1	0,1	1	1	DoctSolo	2
B31s	05	64	0	0	0	^SeqSyn	2
B32s	02	70	0	0	0	^Jno6Saw	2
B32s	05	65	0	0	0	^Polysyn	1
B32s	05	70	0	0	0	^RcsStck	1
B32s	06	67	0	0	0	^D50 Saw	1
B32s	02	64	0	0	0	^MG Saw	1
B32s	02	65	0	0	0	^Voc.Saw	1
B32s	02	66	0	0	0	^CheeSaw	1
B32s	02	69	0	0	0	^OB2Saw1	2
B32s	06	64	0	0	0	^SftLead	2

B32b	06	65	0	0	^8DVSaw1	1
B33	83	00	0,1	1	SynCall	2
B34	84	00	0,1	1	ChifferL	2
B35	85	00	0,1	1	Charang	2
B35t	04	64	0	0	^Ju2SbOs	1
B36	86	00	0,1	1	SoloOff	2
B37	87	00	0,1	1	5th SawW	2
B38	88	00	0,1	1	Bas&Lead	2

B75t	08	0,1	1	ConctBD	1	
B76	118	00	0,1	1	MeloTom1	1
B76t	08	0,1	1	1	MeloTom2	1
B77	119	00	0,1	1	SynthDm	1
B77t	08	0,1	1	1	808 Tom	1
B77z	09	0,1	1	1	ElecPerc	1
B78	120	00	0,1	1	ReverbGm	1

• **SYNTH PAD**

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B41	89	00	0,1	1	Fantasia	2
B42	90	00	0,1	1	Warm Pad	1
B42t	04	2	2	2	^SoftPad	2
B42z	27	64	0	0	^WarmPad	2
B43	27	66	0	0	^Oct Pad	2
B44	27	67	0	0	^OBSTrPd	2
B45	27	70	0	0	^SwePd2	2
B46	27	71	0	0	^OBSTrPd	1
B47	91	00	0,1	1	PolySyn	2
B48	92	00	0,1	1	SpBice	1
B49	93	00	0,1	1	BowGlass	2
B50	94	00	0,1	1	MetalPad	2
B51	95	00	0,1	1	HaloPad	2
B52	96	00	0,1	1	SweepPad	1

• **SFX**

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B81	121	00	0,1	1	GFrtNois	1
B81t	01	0,1	1	1	GrCNoise	1
B81z	02	0,1	1	1	StrSlap	1
B81s	37	68	0	0	^AnalgFX	1
B82	122	00	0,1	1	BrTNoise	1
B82t	01	0,1	1	1	FlClick	1
B83	123	00	0,1	1	Seashtr	1
B83t	01	0,1	1	1	Rain	1
B83z	02	0,1	1	1	Thunder	1
B83s	03	0,1	1	1	Wind	1
B83a	04	0,1	1	1	Stream	2
B83b	05	0,1	1	1	Bubble	2
B84	124	00	0,1	1	Bird	2
B84t	01	0,1	1	1	Dog	1
B84z	02	0,1	1	1	Horse	1
B84s	03	0,1	1	1	Bird 2	1
B85	125	00	0,1	1	Telephn1	1
B85t	01	0,1	1	1	Telephn2	1
B85z	02	0,1	1	1	DCreakng	1
B85s	03	0,1	1	1	Door	1
B85a	04	0,1	1	1	Scratch	1
B85b	05	0,1	1	1	Windchim	2
B85c	37	70	0	0	^DstScrt	2
B86	126	00	0,1	1	Helicptr	1
B86t	01	0,1	1	1	CarEngin	1
B86z	02	0,1	1	1	Car Stop	1
B86s	03	0,1	1	1	Car Pass	1
B86a	04	0,1	1	1	CarCrash	2
B86b	05	0,1	1	1	Siren	1
B86c	06	0,1	1	1	Train	1
B86d	07	0,1	1	1	Jetplane	2
B86e	08	0,1	1	1	Starship	2
B86f	09	0,1	1	1	BurstNois	2
B87	127	00	0,1	1	Applause	2
B87t	01	0,1	1	1	Laughing	1
B87z	02	0,1	1	1	Scream	1
B87s	03	0,1	1	1	Punch	1
B87a	04	0,1	1	1	Heart	1
B87b	05	0,1	1	1	Footstep	1
B88	128	00	0,1	1	Gun Shot	1
B88t	01	0,1	1	1	MachGun	1
B88z	02	0,1	1	1	Lasergun	1
B88s	03	0,1	1	1	Explsion	2
B88a	36	70	0	0	^Robocrd	2
B88b	40	65	0	0	^PnkBomb	2
B88c	36	64	0	0	^UFO FX	2
B88d	36	67	0	0	^Abductn	2
B88e	36	69	0	0	^UP FX	2
B88f	36	71	0	0	^NoisGrw	2
B88g	40	64	0	0	^Explsng	2
B88h	38	65	0	0	^PR5Nois	1
B88i	38	66	0	0	^PnkNois	1
B88j	38	67	0	0	^WhtNois	1

• **ETHNIC MISC**

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B61	105	00	0,1	1	Sitar	1
B61t	01	0,1	1	1	Sitar 2	2
B62	106	00	0,1	1	Banj	1
B63	107	00	0,1	1	Shamisen	1
B64	108	00	0,1	1	Koto	1
B64t	08	0,1	1	1	TKoto	2
B65	109	00	0,1	1	Kalimba	1
B66	110	00	0,1	1	Bag Pipe	1
B67	111	00	0,1	1	Fiddle	1
B68	112	00	0,1	1	Shanai	1

• **PERCUSSIVE**

GBN	PC	CC00	CC32 Receive	CC32 Send	Sound Name	Voices
B71	113	00	0,1	1	TinkBäl	1
B72	114	00	0,1	1	Agog	1
B73	115	00	0,1	1	SteelDr	1
B74	116	00	0,1	1	Woodblk	1
B74t	08	0,1	1	1	Castanet	1
B75	117	00	0,1	1	Taiko	1

Bold/italic names: Tones that will be selected when you use the TONER/USER PROGRAM buttons.

[*] = from SC-88

["] = from SC-88 Pro

[^] = from MC-303

Music Style list

ROCK

BN	Style Name	BPM	TimeSign.	CC00	CC32
11	Rock1	128	4/4	1	17
12	Rock2	140	4/4	1	18
13	HardEdge	96	4/4	1	16
14	Sh Rock1	100	4/4	1	19
15	Sh Rock2	113	4/4	1	20
16	Sh Balld	88	4/4	4	12
17	Sl Rock1	90	6/8	5	15
18	Sl Rock2	80	4/4	5	16

SWING

BN	Style Name	BPM	TimeSign.	CC00	CC32
51	SlSwing	56	4/4	13	7
52	MedSwing	110	4/4	13	8
53	CoolJazz	160	4/4	12	7
54	SwCombo	184	4/4	12	18
55	Blues	60	4/4	44	14
56	R&B	114	4/4	44	5
57	BigBand	135	4/4	14	3
58	Shuffle	180	4/4	15	3

DANCE

BN	Style Name	BPM	TimeSign.	CC00	CC32
21	Dance 1	138	4/4	2	51
22	Dance 2	129	4/4	2	53
23	House 1	128	4/4	2	40
24	House 2	127	4/4	2	45
25	Hip Hop	94	4/4	3	16
26	Techno	132	4/4	2	58
27	Big Beat	132	4/4	1	25
28	Pop Dance	130	4/4	7	41

LATIN

BN	Style Name	BPM	TimeSign.	CC00	CC32
61	Bossa1	125	4/4	22	16
62	Bossa2	173	4/4	22	18
63	Samba1	105	4/4	27	9
64	Samba2	130	4/4	27	10
65	Mambo	89	4/4	38	6
66	Merengue	115	4/4	59	3
67	Salsa	98	4/4	25	7
68	ChaCha	121	4/4	24	7

B-BEAT

BN	Style Name	BPM	TimeSign.	CC00	CC32
31	8B Pop1	60	4/4	6	32
32	8B Pop2	70	4/4	6	33
33	8B Pop3	85	4/4	6	36
34	8B Pop4S	75	4/4	6	39
35	16B Pop1	65	4/4	7	31
36	16B Pop2	85	4/4	7	33
37	16B Pop3	100	4/4	7	34
38	Bld RckS	78	4/4	7	37

VARIETY

BN	Style Name	BPM	TimeSign.	CC00	CC32
71	Son	125	4/4	45	1
72	Calypso	165	4/4	35	4
73	Reggae	96	4/4	8	8
74	Rhumba	97	4/4	23	6
75	EurTango	120	4/4	26	7
76	SlWaltz	90	6/8	18	5
77	March	120	4/4	20	11
78	Polka	128	4/4	19	9

50's & 60's

BN	Style Name	BPM	TimeSign.	CC00	CC32
41	Rock'N1	122	4/4	10	22
42	Rock'N2	176	4/4	10	23
43	Rock'N3	185	4/4	10	25
44	PopRock	140	4/4	39	13
45	Surf	153	4/4	10	21
46	Boogie	150	4/4	9	7
47	Charlest	212	4/4	11	4
48	Twist	158	4/4	10	20

ACOUSTIC

BN	Style Name	BPM	TimeSign.	CC00	CC32
81	G Slow	93	4/4	6	40
82	G Bossa	144	4/4	22	21
83	G Pop	100	4/4	7	40
84	G FstPop	85	4/4	22	22
85	P Ballad	55	4/4	5	17
86	P Shuffl	180	4/4	15	6
87	P Night	60	4/4	13	11
88	P Jazz	150	4/4	12	19

Drum Sets

		PC 1/2 (32 = 0/3) STANDARD 2	PC 9 (32 = 0/3) ROOM	PC 12 (32 = 0) TECHNO	PC 13 (32 = 0) HOUSE	PC 17 (32 = 0/3) POWER
	22	MC-500 Beep 1	»	»	»	»
	23	MC-500 Beep 2	»	»	»	»
C1	24	Concert SD	»	909 BD 7	909 BD 7 ^	»
	25	Snare Roll	»	»	»	»
	26	Finger Snap	Finger Snap	Hyper SD 3 ^	Funky SD 1 ^	Finger Snap
	27	High O	»	707 Clap ^	Real Clap ^	»
	28	Slap	»	Tamb SD 2	»	»
	29	Scratch Push [EXC7]	»	Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]
	30	Scratch Pull [EXC7]	»	808 Clap ^	808 CH ^	Scratch Pull 2 [EXC7]
	31	Sticks	»	»	808 Mid Tom 3 ^	»
	32	Square Click	»	707 CH ^	Real PH 1 ^	»
	33	Metronome Click	»	»	808 Hi Tom 3 ^	»
	34	Metronome Bell	»	Room OH ^	808 OH ^	»
	35	Standard 2 Kick 2	Room Kick 2	TR-808 Kick 2	TR-808 Kick 2	Electric Kick 2
	36	Standard 2 Kick 1	Room Kick 1	TR-808 Kick 1	909 BD 3 ^	Electric Kick 1 *
	37	Side Stick	»	TR-808 Rm Shot	909 Rm Shot ^	»
	38	Standard 2 Snare 1	Room Snare 1	909 SD 3 ^	909 SD 3 ^	Electric Snare 1
	39	TR-808 Hand Clap	TR-808 Hand Clap	Hyper SD 2 ^	909 Clap ^	TR-808 Hand Clap
	40	Standard 2 Snare 2	Room Snare 2	TR-808 Snare 2	TR-808 Snare 2	Electric Snare 2
	41	Low Tom2 *	Room Low Tom 2 *	TR-808 Low Tom 2 *	TR-808 Low Tom 2 *	Electric Low Tom 2 *
	42	Closed Hi-Hat 2 [EXC1]	Closed Hi-Hat 3 [EXC1]	909 CH ^	909 CH ^	Closed Hi-Hat 2 [EXC1]
	43	Low Tom1 *	Room Low Tom 1 *	TR-808 Low Tom 1 *	TR-808 Low Tom 1 *	Electric Low Tom 1 *
	44	Pedal Hi-Hat 2 [EXC1]	Pedal Pedal Hi-Hat [EXC1]	Room CH ^	909 CH 2 ^	Pedal Hi-Hat 2 [EXC1]
	45	Mid Tom2 *	Room Mid Tom 2 *	TR-808 Mid Tom 2 *	909 Mid Tom 1 ^	Electric Mid Tom 2 *
	46	Open Hi-Hat 2 [EXC1]	Open Hi-Hat 3 [EXC1]	909 Dst. OH ^	909 OH ^	Open Hi-Hat 2 [EXC1]
	47	Mid Tom 1 *	Room Mid Tom 1 *	TR-808 Mid Tom 1 *	TR-808 Mid Tom 1 *	Electric Mid Tom 1 *
C2	48	High Tom 2 *	Room High Tom 2 *	TR-808 High Tom 2 *	909 Hi Tom 1 ^	Electric High Tom 2 *
	49	Crash Cymbal	»	909 Crash 1 ^	909 Crash 1 ^	»
	50	High Tom 1 *	Room High Tom 1 *	TR-808 High Tom 1 *	TR-808 High Tom 1 *	Electric High Tom 1 *
	51	Ride Cymbal 1	»	909 Ride ^	TR-606 Ride Cymbal	»
	52	Chinese Cymbal	»	Rev. Cymbal ^	»	Reverse Cymbal
	53	Ride Bell	»	Asian Gong ^	»	»
	54	Tambourine	»	Tambourine ^	Tambourine ^	»
	55	Splash Cymbal	»	»	»	»
	56	Cowbell	»	TR-808 Cowbell	TR-808 Cowbell	»
	57	Crash Cymbal 2	»	909 Crash 3 ^	808 Cymbal 1 ^	»
	58	Vibra-slap	»	»	Vibraslap ^	»
	59	Ride Cymbal 2	»	Ride Cymbal Edge	Ride Cymbal Edge	»
C4	60	High Bongo	»	CR-78 High Bongo	CR-78 High Bongo	»
	61	Low Bongo	»	CR-78 Low Bongo	CR-78 Low Bongo	»
	62	Mute High Conga	»	TR-808 Mute High Conga	Hi Conga Slap ^	»
	63	Open High Conga	»	TR-808 Open High Conga	Hi Conga Open ^	»
	64	Open Low Conga	»	TR-808 Open Low Conga	Lo Conga Open ^	»
	65	High Timbale	»	»	»	»
	66	Low Timbale	»	»	»	»
	67	High Agogo	»	»	»	»
	68	Low Agogo	»	»	»	»
	69	Cabasa	»	»	»	»
	70	Maracas	»	Maracas ^	Cabasa Up ^	»
	71	Short High Whistle [EXL2]	»	»	»	»
C5	72	Long Low Whistle [EXC2]	»	»	»	»
	73	Short Guiro [EXC3]	»	»	»	»
	74	Long Guiro [EXC3]	»	CR-78 Guiro [EXC3]	CR-78 Guiro [EXC3]	»
	75	Claves	»	TR-808 Claves	TR-808 Claves	»
	76	High Wood Block	»	»	»	»
	77	Low Wood Block	»	»	»	»
	78	Mute Cuica [EXC4]	»	High Hoo [EXC4]	High Hoo [EXC4]	»
	79	Open Cuica [EXC4]	»	Low Hoo [EXC4]	Low Hoo [EXC4]	»
	80	Mute Triangle [EXC5]	»	Electric Mute Triangle	Electric Mute Triangle	»
	81	Open Triangle [EXC5]	»	Electric Open Triangle	Electric Open Triangle	»
	82	Shaker	»	626 Shaker ^	TR-626 Shaker	»
	83	Jingle Bell	»	»	»	»
	84	Bar Chimes	Bell Tree	Bell Tree	Bell Tree	Bell Tree
	85	Castanets	»	»	»	»
	86	Mute Surdo [EXC6]	»	»	»	»
	87	Open Surdo [EXC6]	»	»	»	»
	88	Applause 2 *	»	Small Club 1 ^	-Small Club 1 *	»
	89	—	—	—	—	—
	90	—	—	—	Syn Perc. ^	—
	91	—	—	—	MG Blip. ^	—
	92	—	—	—	—	—
	93	—	—	—	—	—
	94	—	—	—	—	—
	95	—	—	—	—	—
C7	96	—	—	—	—	—

White keys: only accessible via the keyboard when Transpose is set to "-1" or "1".

Gray keys: accessible via the keyboard when transposition for Drum Sets is off.

All percussion sounds come from SC-88 Pro except for ^ (MC-303) and \$ (SC-55).

PC: Program Number (Drum Set Number)

—: No sound

*: Tones that require two voices (polyphony)

*: Same as the percussion sound of "STANDARD" (PC1)

[EXC]: Tones of the same EXC number cannot sound simultaneously

^: Percussion sounds taken from the MC-303

\$: From the percussion sounds of SC-55

	PC 25 (32 = 0/3) ELECTRONIC	PC 26 (32 = 0/3) TR-808	PC 31 (32 = 1) TR-909	PC 33 (32 = 0/3) JAZZ	PC 41 (32 = 0/3) BRUSH
22	»	»	»	»	»
23	»	»	»	»	»
C1 24	»	»	909 BD 1 ^	»	»
25	»	»	»	»	»
26	Finger Snap	Finger Snap 2	909 SD 3 ^	Finger Snap	Finger Snap
27	»	»	Hip Clap 1 ^	»	»
28	»	»	909 SD 1 ^	»	»
29	Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]	»	»
30	Scratch Pull 2 [EXC7]	Scratch Pull 2 [EXC7]	808 CH ^	»	»
31	»	»	»	»	»
32	»	»	»	»	»
33	»	»	909 Dist. OH ^	»	»
34	»	»	»	»	»
35	Electric Kick 2	TR-808 Kick 2	TR-808 Kick 2	Jazz Kick 2	Jazz Kick 2
C2 36	Electric Kick 1 *	TR-808 Kick 1	909 BD 1 ^	Jazz Kick 1	Jazz Kick 1
37	»	TR-808 Rim Shot	TR-808 Rim Shot	»	»
38	Electric Snare 1	TR-808 Snare 1	909 SD 2 ^	Jazz Snare 1	Brush Snare 1
39	TR-808 Hand Clap	TR-808 Hand Clap	909 Clap ^	Hand Clap 2	Brush Slap
40	Electric Snare 2	TR-808 Snare 2	TR-808 Snare 2	Jazz Snare 2	Brush Snare 2
41	Electric Low Tom 2 *	TR-808 Low Tom 2 *	TR-808 Low Tom 2 *	»	Brush Low Tom 2 ^
42	Closed Hi-Hat 2 [EXC1]	TR-808 Closed Hi-Hat [EXC1]	909 CH ^	Closed Hi-Hat 2 [EXC1]	Brush Closed Hi-Hat [EXC1]
43	Electric Low Tom 1 *	TR-808 Low Tom 1 *	TR-808 Low Tom 1 *	»	Brush Low Tom 1 *
44	Pedal Hi-Hat 2 [EXC1]	TR-808 Closed Hi-Hat2 [EXC1]	-909 Cl 2 ^	Pedal Hi-Hat 2 [EXC1]	Pedal Hi-Hat [EXC1]
45	Electric Mid Tom 2 *	TR-808 Mid Tom 2 *	TR-808 Mid Tom 2 *	»	Brush Mid Tom 2 *
46	Open Hi-Hat 2 [EXC1]	TR-808 Open Hi-Hat [EXC1]	909 OH ^	Open Hi-Hat 2 [EXC1]	Brush Open Hi-Hat [EXC1]
47	Electric Mid Tom 1 *	TR-808 Mid Tom 1 *	TR-808 Mid Tom 1 *	»	Brush Mid Tom 1 *
C3 48	Electric High Tom 2 *	TR-808 High Tom 2 *	TR-808 High Tom 2 *	»	Brush High Tom 2 *
49	»	TR-808 Crash Cymbal	909 Crash 1 ^	»	Brush Crash Cymbal
50	Electric High Tom 1 *	TR-808 High Tom 1 *	TR-808 High Tom 1 *	»	Brush High Tom 1 *
51	»	TR-606 Ride Cymbal	909 Ride ^	Ride Cymbal Inner	Ride Cymbal Inner
52	Reverse Cymbal	»	909 Rev. Cymbal ^	»	»
53	»	»	»	»	Brush Ride Bell
54	»	CR-78 Tambourine	Tambourine ^	»	»
55	»	»	909 Crash 2 ^	»	»
56	»	TR-808 Cowbell	Cowbell ^	»	»
57	»	TR-909 Crash Cymbal	TR-909 Crash Cymbal	»	»
58	»	»	»	»	»
59	»	Ride Cymbal Edge	Ride Cymbal Edge	Ride Cymbal Edge	»
C4 60	»	CR-78 High Bongo	CR-78 High Bongo	»	»
61	»	CR-78 Low Bongo	CR-78 Low Bongo	»	»
62	»	TR-808 Mute High Conga	TR-808 Mute High Conga	»	»
63	»	TR-808 Open High Conga	TR-808 Open High Conga	»	»
64	»	TR-808 Open Low Conga	TR-808 Open Low Conga	»	»
65	»	»	»	»	»
66	»	»	»	»	»
67	»	»	»	»	»
68	»	»	»	»	»
69	»	»	»	»	»
70	»	TR-808 Maracas	TR-808 Maracas	»	»
71	»	»	»	»	»
C5 72	»	»	»	»	»
73	»	»	»	»	»
74	»	CR-78 Guiro [EXC3]	CR-78 Guiro [EXC3]	»	»
75	»	TR-808 Claves	TR-808 Claves	»	»
76	»	»	»	»	»
77	»	»	»	»	»
78	»	High Hoo [EXC4]	High Hoo [EXC4]	»	»
79	»	Low Hoo [EXC4]	Low Hoo [EXC4]	»	»
80	»	Electric Mute Triangle	Electric Mute Triangle	»	»
81	»	Electric Open Triangle	Electric Open Triangle	»	»
82	»	TR-626 Shaker	626 Shaker ^	»	»
83	»	»	»	»	»
C6 84	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Bell Tree
85	»	»	»	»	»
86	»	»	»	»	»
87	»	»	»	»	»
88	Small Club 1 *	Small Club 1 *	Small Club 1 *	Applause *	Applause *
89	»	»	»	»	»
90	»	»	»	»	»
91	»	»	»	»	»
92	»	»	»	»	»
93	»	»	»	»	»
94	»	»	»	»	»
95	»	»	»	»	»
C7 96	»	»	»	»	»

White keys: only accessible via the keyboard when Transpose is set to "-1" or "1"
 Gray keys: accessible via the keyboard when Transposition for Drum Sets is off

All percussion sounds come from SC-88 Pro except for ^ (MC-303) and \$ (SC-55)

PC: Program Number (Drum Set Number)

»: Same as the percussion sound of "STANDARD" (PC 1)

^: Percussion sounds taken from the MC-303

---: No sound

[EXC]: Tones of the same EXC number cannot sound simultaneously

\$: From the percussion sounds of SC-55

		PC 49 (32 = 0/3) ORCHESTRA	PC 57 (32 = 0/1) SFX
	22		---
	23	»	---
	24	»	---
C1	25	»	---
	26	Finger Snap	---
	27	Closed Hi-Hat 2 [EXC1]	---
	28	Pedal Hi-Hat [EXC1]	---
	29	Open Hi-Hat 2 [EXC1]	---
	30	Ride Cymbal 1	---
	31	»	---
	32	»	---
	33	»	---
	34	»	---
	35	Jazz Kick 1	---
C2	36	Concert BD 1	---
	37	»	---
	38	Concert SD	---
	39	Castanets	High Q \$
	40	Concert SD	Slap \$
	41	Timpani F	Scratch Push \$ [EXC7]
	42	Timpani F#	Scratch Pull \$ [EXC7]
	43	Timpani G	Sticks \$
	44	Timpani G#	Square Click \$
	45	Timpani A	Metronome Click \$
	46	Timpani A#	Metronome Bell \$
	47	Timpani B	Guitar Sliding Finger \$
C3	48	Timpani C	Gtr Noise 1 \$
	49	Timpani C#	Gtr Noise 2 \$
	50	Timpani D	String Slap \$
	51	Timpani D#	Key Click \$
	52	Timpani E	Laughing \$
	53	Timpani F	Screaming \$
	54	»	Punch \$
	55	»	Heart Beat \$
	56	»	Footsteps 1 \$
	57	Concert Cymbal 2	Footsteps 2 \$
	58	»	Applause \$ *
	59	Concert Cymbal 1	Door Creaking \$
C4	60	»	Door \$
	61	»	Scratch \$
	62	»	Wind Chimes \$ *
	63	»	Car Engine \$
	64	»	Car Stop \$
	65	»	Car Passing \$
	66	»	Car Crash \$ *
	67	»	Siren \$
	68	»	Train \$
	69	»	Jetplane \$ *
	70	»	Helicopter \$
	71	»	Starship \$ *
G	72	»	Gun Shot \$
	73	»	Machine Gun \$
	74	»	Laser Gun \$
	75	»	Explosion \$ *
	76	»	Dog \$
	77	»	Horse-Gallop \$
	78	»	Birds \$ *
	79	»	Rain \$
	80	»	Thunder \$
	81	»	Wind \$
	82	»	Seashore \$
	83	»	Stream \$ *
C5	84	Bell Tree	Bubble \$ *
	85	»	---
	86	»	---
	87	»	---
	88	Applause *	---
	89	»	---
	90	»	---
	91	»	---
	92	»	---
	93	»	---
	94	»	---
	95	»	---
C7	96	»	---

White keys: only accessible via the keyboard when Transpose is set to "-1" or "1".
 Gray keys: accessible via the keyboard when transposition for Drum Sets is off.

All percussion sounds come from SC-88 Pro except for ^ (MC-303) and \$ (SC-55).

PC: Program Number (Drum Set Number)

»: Same as the percussion sound of "STANDARD" (PC1)

—: No sound

[EXC]: Tones of the same EXC number cannot sound simultaneously

*: Tones that require two voices (polyphony)

^: Percussion sounds taken from the MC-303

\$: From the percussion sounds of SC-55

MIDI Implementation Charts

CREATIVE KEYBOARD (Arranger)

Model: EM-50/30

Date : NOV 1998

Version: 1.00

MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16, Off	1-16 1-16, Off	1= ACC1, 2=A.BASS, 3=ACC2, 4=Upper1, 5=ACC3, 6=Upper2 7=ACC4, 8=ACC5, 9=ACC6, 10=A Drums/St PG, 11=Lower, 12=M.Bass, 13=Basic Channel, 14=NTA1, 15=NTA2, 16=M.Drums
Mode	Default Message Altered	Mode 3 Mode 3, 4(M=1) *****	Mode 3 Mode 3, 4(M=1) *2	
Note Number	True Voice	0-127 *****	0-127 0-127	*1
Velocity	Note ON Note OFF	O X	O X	*1
After Touch	Key's Ch's	X X	O O	
Pitch Bend		O	*1	O *1
Control Change	0, 32	O	O	Bank Select
	1	O	*1	Modulation
	5	O	O	Portamento Time
	6, 38	O	O	Data Entry
	7	O	*1	Volume
	10	O	O	Panpot
	11	O	O	Expression
	64	O	*1	Hold 1
	65	X	O	Portamento
	66	X	O	Sostenuto
	67	X	O	Soft
	84	O	O	Portamento Control
	91	O	O (Reverb)	Effect 1 Depth
	93	O	O (Chorus)	Effect 3 Depth
	98, 99	O	O	NRPN LSB,MSB
	100,101	O	O	RPN LSB,MSB
Program Change	True #	O *****	*1 0-127	*1 Program Number: 1-128
System Exclusive		O	O	
System Common	Song Pos Song Sel Tune	X X X	X X X	
System Real Time	Clock Commands	O O	*1 *1	O *1 *1 MIDI File Record/Play
Aux Messages	All Sounds Off Reset All Controllers Local On/Off All Notes Off Active Sense Reset	X X X X O X	O (120,126,127) O (121) O O (123-125) O X	
Notes		*1 O X is selectable. *2 Recognized as M=1 even if M≠1		

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLYMode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONOO : Yes
X : No

CREATIVE KEYBOARD (Sound Module, Keyboard Section, SMF Player)

Model : EM-50/30

Date : NOV 1998

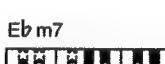
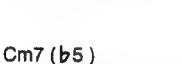
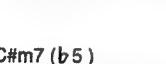
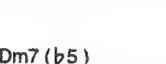
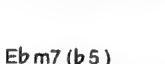
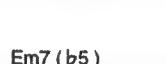
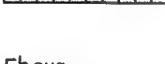
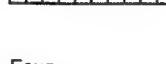
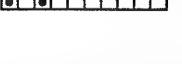
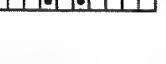
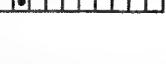
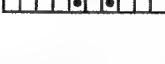
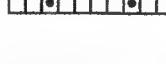
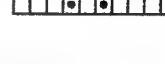
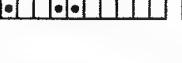
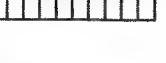
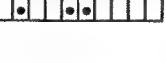
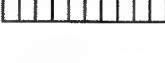
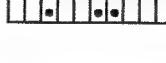
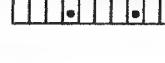
Version : 1.00

MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16, Off	1-16 1-16, Off	4=Upper1, 6=Upper2 10=M.Drums 11=Lower
Mode	Default Message Altered	Mode 3 Mode 3, 4(M=1) ****	Mode 3 Mode 3, 4(M=1) *2	
Note Number	True Voice	0-127 ****	0-127 0-127	*1
Velocity	Note ON Note OFF	O X	O X	*1
After Touch	Key's Ch's	X X	O O	
Pitch Bend		O	O	*1
Control Change	0, 32	O	O	
	1	O	O	*1
	5	O	O	
	6, 38	O	O	
	7	O	O	*1
	10	O	O	
	11	O	O	
	64	O	O	
	65	O	O	
	66	O	O	
	67	O	O	
	84	O	O	
	91	O	O (Reverb)	
	93	O	O (Chorus)	
Program Change	98, 99	O	O	*1
	100, 101	O	O	
Program Change	True #	O ****	O 0-127	*1 Program Number: 1-128
System Exclusive		O	O	
System Common	Song Pos Song Sel Tune	O X X	O X X	*1
System Real Time	Clock Commands	O O	O O	*1 *1 MIDI File Record/Play
Aux Messages	All Sounds Off	O	O (120,126,127)	
	Reset All Controllers	O	O (121)	
	Local On/Off	X	O	
	All Notes Off	O	O (123-125)	
	Active Sense	O	O	
	Reset	X	X	
Notes		*1 O X is selectable. *2 Recognized as M=1 even if M≠1		

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLYMode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONOO : Yes
X : No

Chord Intelligence

C	C#	D	E♭	E	F
					
CM7	C#M7	DM7	E♭ M7	EM7	FM7
					
C7	C#7	D7	E♭ 7	E7	F7
					
Cm	C#m	Dm	E♭ m	Em	Fm
					
CM7	C#m7	Dm7	E♭ m7	Em7	Fm7
					
CmM7	C#mM7	DmM7	E♭ mM7	EmM7	FmM7
					
Cdim	C#dim	Ddim	E♭ dim	Edim	Fdim
					
Cm7 (b5)	C#m7 (b5)	Dm7 (b5)	E♭ m7 (b5)	Em7 (b5)	Fm7 (b5)
					
Caug	C#aug	Daug	E♭ aug	Eaug	Faug
					
Csus4	C#sus4	Dsus4	E♭ sus4	Esus4	Fsus4
					
C7sus4	C#7sus4	D7sus4	E♭ 7sus4	E7sus4	F7sus4
					

F#	G	A b	A	B b	B
F#M7	GM7	A b M7	AM7	B b M7	BM7
F#7	G7	A b 7	A7	B b 7	B7
F#m	Gm	A b m	Am	B b m	Bm
F#m7	Gm7	A b m7	Am7	B b m7	Bm7
F#mM7	GmM7	A b mM7	AmM7	B b mM7	BmM7
F#dim	Gdim	A b dim	Adim	B b dim	Bdim
F#m7 (b5)	Gm7 (b5)	A b m7 (b5)	Am7 (b5)	B b m7 (b5)	Bm7 (b5)
F#aug	Gaug	A b aug	Aaug	B b aug	Baug
F#sus4	Gsus4	A b sus4	Asus4	B b sus4	Bsus4
F#7sus4	G7sus4	A b 7sus4	A7sus4	B b 7sus4	B7sus4

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